Innolume GmbH
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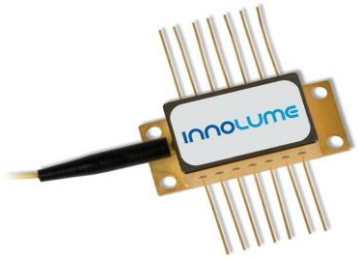
SLD-1000-100-YY-25

Fiber Coupled Superluminescence Diode (SLD)



Features:

- Ultra broadband ASE spectra (950-1050nm)
- Low ripples
- Strong linear polarization
- Individual burn-in and thermal cycling screening
- RoHS compliance

Applications:

- Fiber sensors, instrumentation, spectroscopy

SPECIFICATIONS

Test conditions: CW operation, chip temperature 25°C, the case is mounted on room temperature heatsink

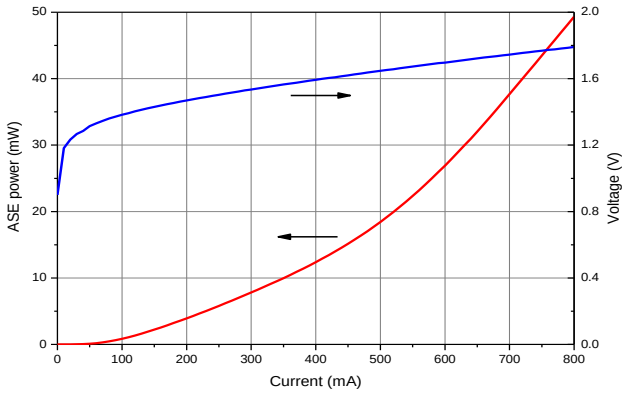
Parameters	Symb.	Min.	Typ.	Max.	Unit
Operating output power	Pout	15	25		mW
ASE mean wavelength	λm	985	1000	1015	nm
ASE bandwidth @ -3dB	Δλ	80	100		nm
Amplitude of ASE spectrum dip			1	3	dB
ASE ground state maximum position	λg	1015	1030	1045	nm
ASE excited state maximum position	λe	940	955	970	nm
ASE spectrum ripples*			0.02	0.3	dB
Polarization Extinction Ratio	PER	15	20		dB
Operating current	Iop		600	700	mA
Forward voltage	Vf		1.7	1.9	V

* RMS in 1nm range at ASE maximum, 10pm resolution

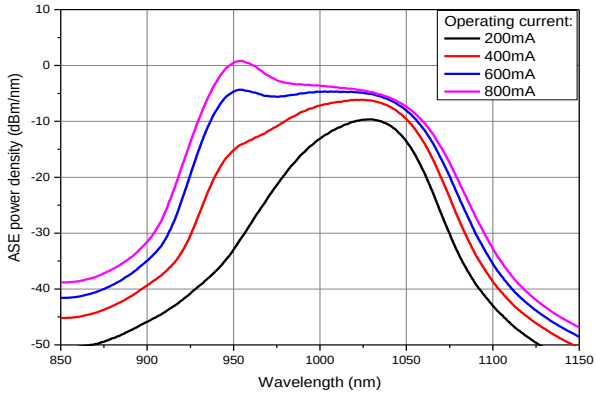
TYPICAL PERFORMANCE for reference only

Test conditions: CW operation, chip temperature 25°C, the case is mounted on room temperature heatsink

Light-Current-Voltage Characteristics



Spectral Characteristics



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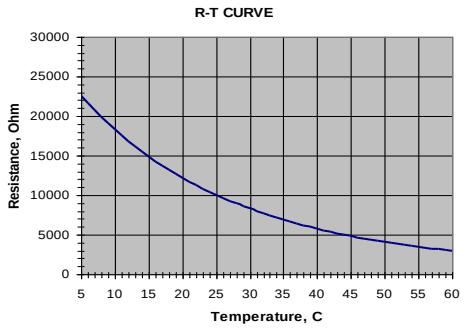
ABSOLUTE MAXIMUM RATINGS

Parameters	Min.	Max.	Unit
SLD reverse voltage	-	2	V
SLD CW forward current	-	900	mA
Thermo Electric Cooler current	-	3	A
Thermo Electric Cooler voltage	-	4	V
Fiber bend radius	3	-	cm
Chip operating temperature range	5	40	°C
Case operating temperature range	0	70	°C
Storage temperature range	-40	85	°C

THERMISTOR SPECIFICATION

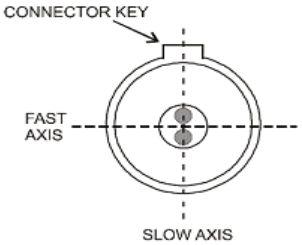
Parameters	Value	Unit
Thermistor type	NTC	-
Resistance @25°C	10 ± 0.1	kOhm
Beta 0-50°C	3375±1%	K



FIBER SPECIFICATION

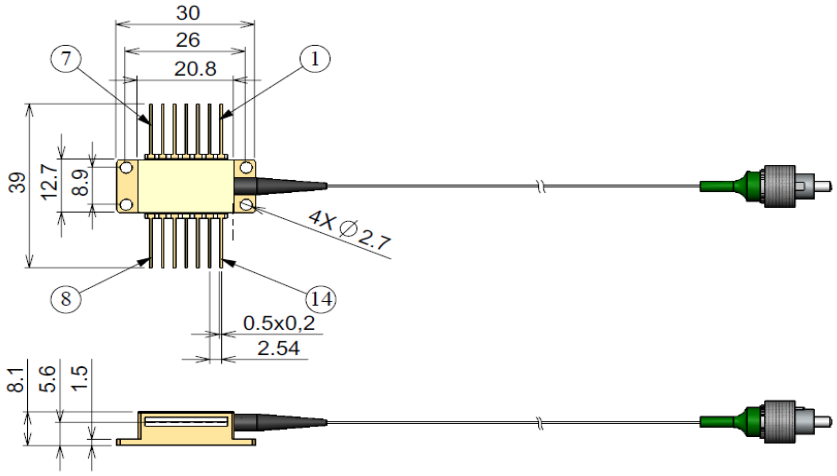
Parameters	HI1060	PM980	Unit
Numerical aperture (Typical)	0.14	0.12	
Cutoff wavelength	920±50	900±70	nm
Mode-field diameter (@1060nm)	6.2±0.3	6.6±0.3	µm
Cladding diameter	125±1	125±1	µm
Coating diameter	245±15	245±15	µm
Length	1.0 ± 0.1	1.0 ± 0.1	m
Connector	FC/APC (narrow key)		

Connector alignment to the PANDA fiber



The output light is polarized along the slow axis of PM fiber.

DIMENSIONS (in mm)



Pin identification:

1	TEC "+"
2	Thermistor
3	-
4	-
5	Thermistor
6	-
7	-
8	-
9	-
10	SLD anode "+"
11	SLD cathode "-"
12	-
13	Case
14	TEC "-"

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SAFETY AND OPERATING INSTRUCTIONS

The light emitted from this device is invisible and can be harmful to the human eye. Avoid looking directly into the fiber connector when the device is in operation. Proper laser safety eyewear must be worn during operation with open connector.

Absolute Maximum Ratings may be applied to the SLD for short period of time only. Exposure to maximum ratings for extended period of time or exposure to more than one maximum rating may cause damage or affect the reliability of the device. Operating the SLD outside of its maximum ratings may cause device failure or a safety hazard. Power supplies used with the component must be employed such that the maximum forward current cannot be exceeded.

A proper heatsink for the SLD on thermal radiator is required. The SLD must be mounted on radiator with 4 screws (bolt down in X-style fashion with initial torque set to 0.075Nm and final X-style bolt down at 0.15Nm) or with clamps. The deviation from flatness of radiator surface must be less than 0.05mm. It's recommended using of Indium foil or thermal conductive and soft material between bottom of the case and heatsink for thermal interface. It's undesirable to use thermal grease for this.

Avoid back reflection to the SLD. It may give impact on the device performance in aspects of spectrum and power stability. It also may cause fatal SLD facet damage. Using of optical isolators is highly recommended to block back reflection.

Do not pull the fiber. Do not bend a fiber with a radius smaller than 3 cm. Operate the laser module with clean fiber connector only. Periodically check and clean the connector if necessary. To clean the connector use a clean-room compatible tissue only, put some Isopropyl alcohol onto it and carefully clean the facet of the connector, or use special fiber cleaning tools. Perform cleaning only with the laser current switched off.

Electrostatic discharge can lead to device failure. Take necessary precautions to prevent ESD.

Part Number Identification

YY: Optical fiber type
PM – PM980 fiber
HI – HI1060 fiber
Example: SLD-1000-100-PM-25

NOTE: Innolume product specifications are subject to change without notice

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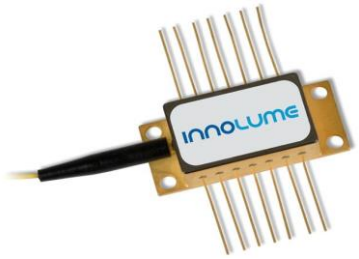
SLD-1030-20-YY-150

Fiber Coupled Superluminescence Diode (SLD)



Features:

- High output power at 1030nm
- Low ripples
- Strong linear polarization
- Individual burn-in and thermal cycling screening
- RoHS compliance

Applications:

- Fiber sensors, instrumentation, spectroscopy

SPECIFICATIONS

Test conditions: CW operation, chip temperature 25°C, the case is mounted on room temperature heatsink

Parameters	Symb.	Min.	Typ.	Max.	Unit
Operating output power	Pout	150			mW
Mean wavelength	λm	1020	1030	1040	nm
Bandwidth @ -3dB	Δλ	15	20		nm
ASE spectrum ripples*			0.04	0.3	dB
Polarization Extinction Ratio	PER	15	20		dB
Operating current	Iop		800	1000	mA
Forward voltage	Vf		1.7	1.9	V

* RMS in 1nm range at ASE maximum, 10pm resolution

TYPICAL SLD PARAMETERS vs. OPERATING CURRENT

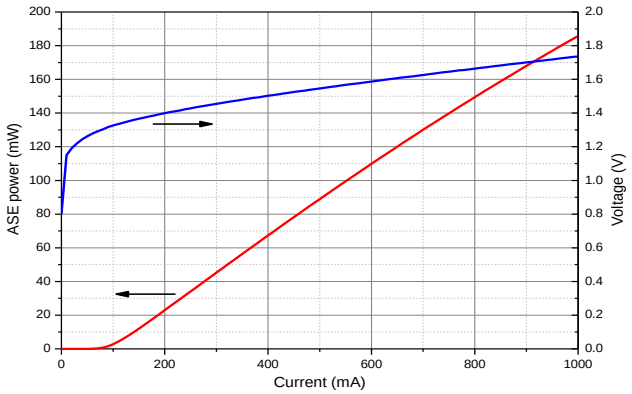
Test conditions: CW operation, chip temperature 25°C, case temperature 25°C

Operating Current, mA	Output power, mW	ASE bandwidth @3dB, nm	Ripples RMS, dB	
200	25	20	0.01	
400	70	22	0.03	
600	110	24	0.04	
800	150	25	0.05	

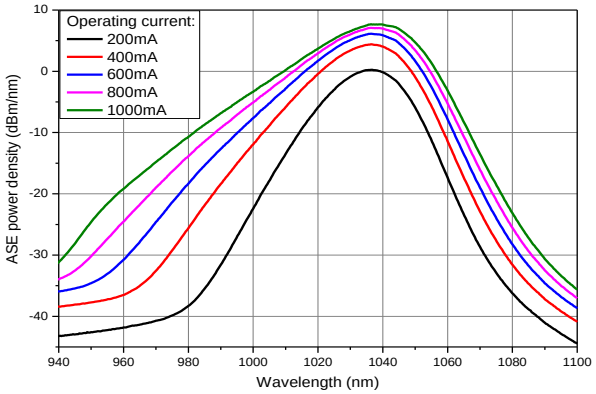
TYPICAL PERFORMANCE for reference only

Test conditions: CW operation, chip temperature 25°C, the case is mounted on room temperature heatsink

Light-Current-Voltage Characteristics



Spectral Characteristics



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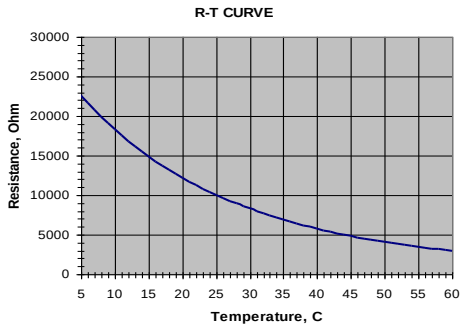
ABSOLUTE MAXIMUM RATINGS

Parameters	Min.	Max.	Unit
SLD reverse voltage	-	2	V
SLD CW forward current	-	1300	mA
Thermo Electric Cooler current	-	3	A
Thermo Electric Cooler voltage	-	4	V
Fiber bend radius	3	-	cm
Chip operating temperature range	5	40	°C
Case operating temperature range	0	70	°C
Storage temperature range	-40	85	°C

THERMISTOR SPECIFICATION

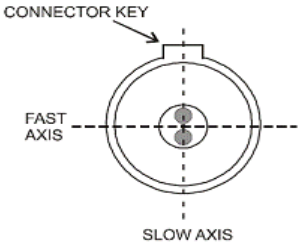
Parameters	Value	Unit
Thermistor type	NTC	-
Resistance @25°C	10 ± 0.1	kOhm
Beta 0-50°C	3375±1%	K



FIBER SPECIFICATION

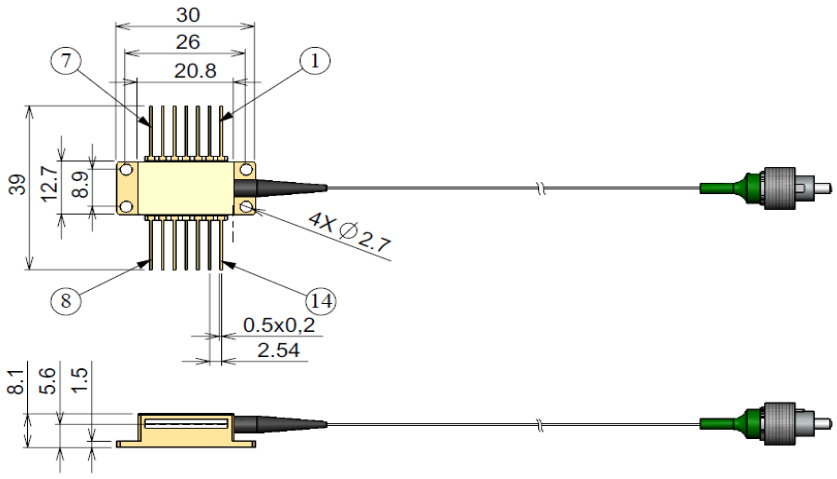
Parameters	HI1060	PM980	Unit
Numerical aperture (Typical)	0.14	0.12	
Cutoff wavelength	920±50	900±70	nm
Mode-field diameter (@1060nm)	6.2±0.3	6.6±0.3	μm
Cladding diameter	125±1	125±1	μm
Coating diameter	245±15	245±15	μm
Length	1.0 ± 0.1	1.0 ± 0.1	m
Connector	FC/APC (narrow key)		

Connector alignment to the PANDA fiber



The output light is polarized along the slow axis of PM fiber.

DIMENSIONS (in mm)



Pin identification:

1	TEC "+"
2	Thermistor
3	-
4	-
5	Thermistor
6	-
7	-
8	-
9	-
10	SLD anode "+"
11	SLD cathode "-"
12	-
13	Case
14	TEC "-"

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SAFETY AND OPERATING INSTRUCTIONS

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A proper heatsink for the SLD on thermal radiator is required. The SLD must be mounted on radiator with 4 screws (bolt down in X-style fashion with initial torque set to 0.075Nm and final X-style bolt down at 0.15Nm) or with clamps. The deviation from flatness of radiator surface must be less than 0.05mm. It's recommended using of Indium foil or thermal conductive and soft material between bottom of the case and heatsink for thermal interface. It's undesirable to use thermal grease for this.

Avoid back reflection to the SLD. It may give impact on the device performance in aspects of spectrum and power stability. It also may cause fatal SLD facet damage. Using of optical isolators is highly recommended to block back reflection.

Do not pull the fiber. Do not bend a fiber with a radius smaller than 3 cm. Operate the laser module with clean fiber connector only. Periodically check and clean the connector if necessary. To clean the connector use a clean-room compatible tissue only, put some Isopropyl alcohol onto it and carefully clean the facet of the connector, or use special fiber cleaning tools. Perform cleaning only with the laser current switched off.

Electrostatic discharge can lead to device failure. Take necessary precautions to prevent ESD.

Part Number Identification

YY: Optical fiber type
PM – PM980 fiber
HI – HI1060 fiber
Example: SLD-1030-20-PM-150

NOTE: Innolume product specifications are subject to change without notice

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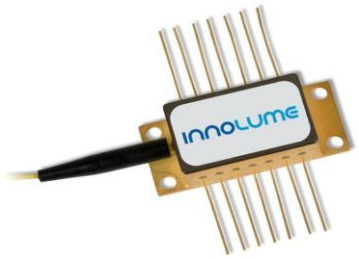
SLD-1030-120-YY-15

Fiber Coupled Superluminescence Diode (SLD)



Features:

- Ultra broadband ASE spectra (960-1080nm)
- Low ripples
- Strong linear polarization
- Individual burn-in and thermal cycling screening
- RoHS compliance

Applications:

- Fiber sensors, instrumentation, spectroscopy

SPECIFICATIONS

Test conditions: CW operation, chip temperature 25°C, the case is mounted on room temperature heatsink

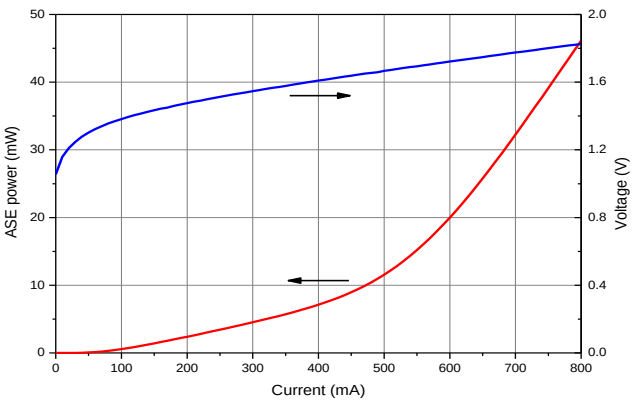
Parameters	Symb.	Min.	Typ.	Max.	Unit
Operating output power	Pout	10	15		mW
ASE mean wavelength	λm	1015	1030	1045	nm
ASE bandwidth @ -3dB	Δλ	90	120		nm
Amplitude of ASE spectrum dip			4	7	dB
ASE ground state maximum position	λg	1035	1050	1065	nm
ASE excited state maximum position	λe	955	970	985	nm
ASE spectrum ripples*			0.02	0.3	dB
Polarization Extinction Ratio	PER	15	20		dB
Operating current	Iop		550	600	mA
Forward voltage	Vf		1.7	1.9	V

* RMS in 1nm range at ASE maximum, 10pm resolution

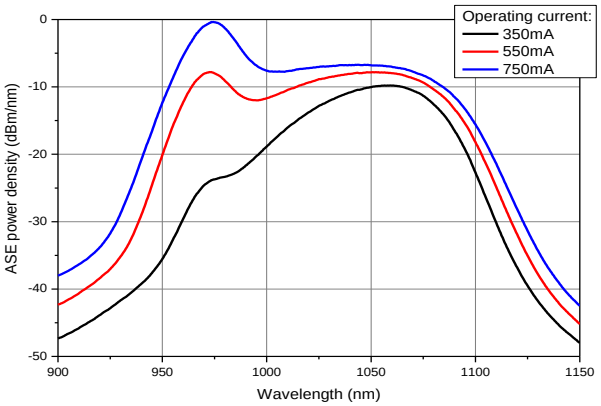
TYPICAL PERFORMANCE for reference only

Test conditions: CW operation, chip temperature 25°C, the case is mounted on room temperature heatsink

Light-Current-Voltage Characteristics



Spectral Characteristics



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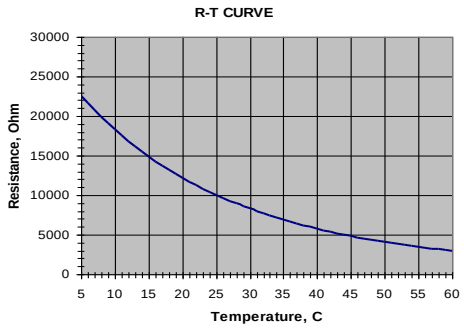
ABSOLUTE MAXIMUM RATINGS

Parameters	Min.	Max.	Unit
SLD reverse voltage	-	2	V
SLD CW forward current	-	900	mA
Thermo Electric Cooler current	-	3	A
Thermo Electric Cooler voltage	-	4	V
Fiber bend radius	3	-	cm
Chip operating temperature range	5	40	°C
Case operating temperature range	0	70	°C
Storage temperature range	-40	85	°C

THERMISTOR SPECIFICATION

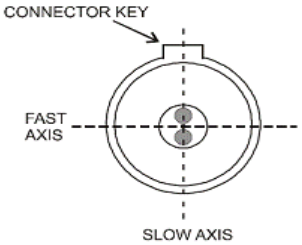
Parameters	Value	Unit
Thermistor type	NTC	-
Resistance @25°C	10 ± 0.1	kOhm
Beta 0-50°C	3375±1%	K



FIBER SPECIFICATION

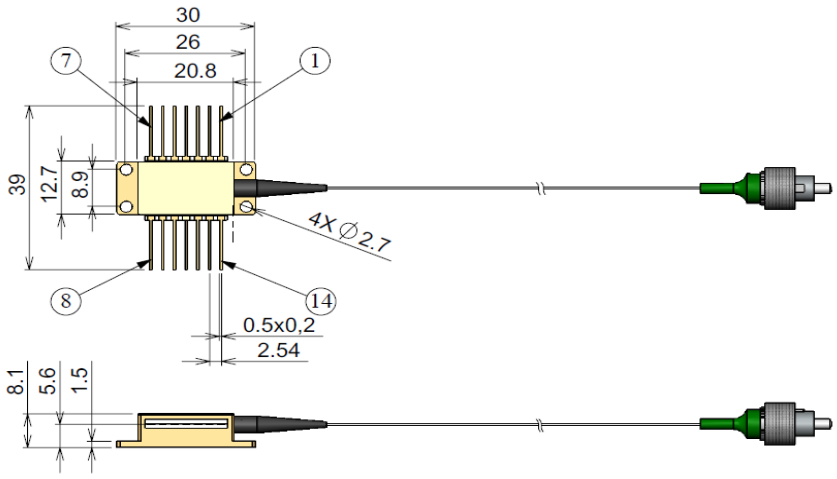
Parameters	HI1060	PM980	Unit
Numerical aperture (Typical)	0.14	0.12	
Cutoff wavelength	920±50	900±70	nm
Mode-field diameter (@1060nm)	6.2±0.3	6.6±0.3	µm
Cladding diameter	125±1	125±1	µm
Coating diameter	245±15	245±15	µm
Length	1.0 ± 0.1	1.0 ± 0.1	m
Connector	FC/APC (narrow key)		

Connector alignment to the PANDA fiber



The output light is polarized along the slow axis of PM fiber.

DIMENSIONS (in mm)



Pin identification:

1	TEC "+"
2	Thermistor
3	-
4	-
5	Thermistor
6	-
7	-
8	-
9	-
10	SLD anode "+"
11	SLD cathode "-"
12	-
13	Case
14	TEC "-"

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SAFETY AND OPERATING INSTRUCTIONS

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A proper heatsink for the SLD on thermal radiator is required. The SLD must be mounted on radiator with 4 screws (bolt down in X-style fashion with initial torque set to 0.075Nm and final X-style bolt down at 0.15Nm) or with clamps. The deviation from flatness of radiator surface must be less than 0.05mm. It's recommended using of Indium foil or thermal conductive and soft material between bottom of the case and heatsink for thermal interface. It's undesirable to use thermal grease for this.

Avoid back reflection to the SLD. It may give impact on the device performance in aspects of spectrum and power stability. It also may cause fatal SLD facet damage. Using of optical isolators is highly recommended to block back reflection.

Do not pull the fiber. Do not bend a fiber with a radius smaller than 3 cm. Operate the laser module with clean fiber connector only. Periodically check and clean the connector if necessary. To clean the connector use a clean-room compatible tissue only, put some Isopropyl alcohol onto it and carefully clean the facet of the connector, or use special fiber cleaning tools. Perform cleaning only with the laser current switched off.

Electrostatic discharge can lead to device failure. Take necessary precautions to prevent ESD.

Part Number Identification

YY: Optical fiber type
PM – PM980 fiber
HI – HI1060 fiber
Example: SLD-1030-120-PM-15

NOTE: Innolume product specifications are subject to change without notice

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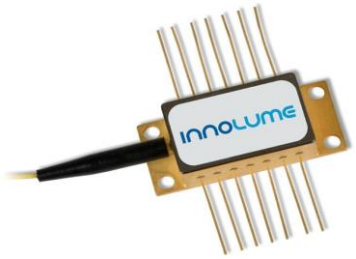
SLD-1050-90-YY-35

Fiber Coupled Superluminescence Diode (SLD)



Features:
- Ultra broadband ASE spectra (990-1110nm)
- Strong linear polarization
- Individual burn-in and thermal cycling screening
- RoHS compliance

Applications:
- Fiber sensors, instrumentation, spectroscopy

SPECIFICATIONS

Test conditions: CW operation, chip temperature 25°C, the case is mounted on room temperature heatsink

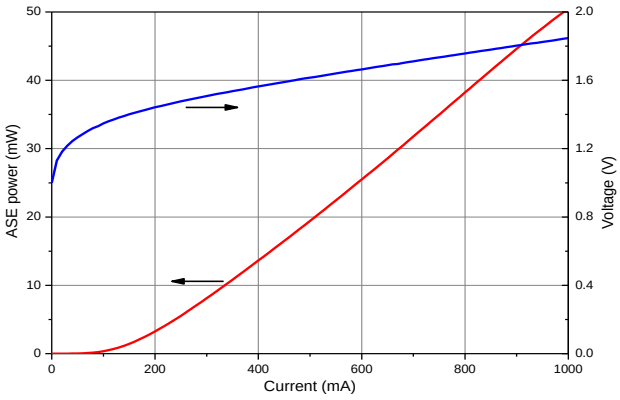
Parameters	Symb.	Min.	Typ.	Max.	Unit
Operating output power	Pout	25	35		mW
ASE mean wavelength	λm	1045	1050	1060	nm
ASE bandwidth @ -3dB	Δλ	70	90		nm
ASE spectrum ripples			0.2	0.5	dB
Polarization Extinction Ratio	PER	15	20		dB
Operating current	Iop		700	800	mA
Forward voltage	Vf		1.7	1.9	V

* RMS in 1nm range at ASE maximum, 10pm resolution

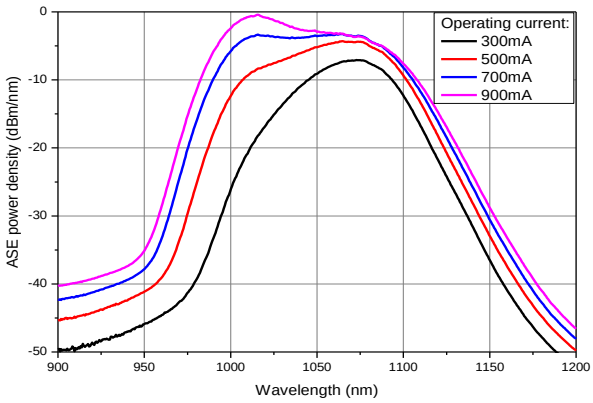
TYPICAL PERFORMANCE for reference only

Test conditions: CW operation, chip temperature 25°C, the case is mounted on room temperature heatsink

Light-Current-Voltage Characteristics



Spectral Characteristics



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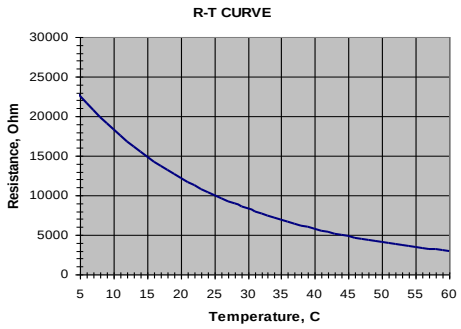
ABSOLUTE MAXIMUM RATINGS

Parameters	Min.	Max.	Unit
SLD reverse voltage	-	2	V
SLD CW forward current	-	Iop+300	mA
Thermo Electric Cooler current	-	3	A
Thermo Electric Cooler voltage	-	4	V
Fiber bend radius	3	-	cm
Chip operating temperature range	5	40	°C
Case operating temperature range	0	70	°C
Storage temperature range	-40	85	°C

THERMISTOR SPECIFICATION

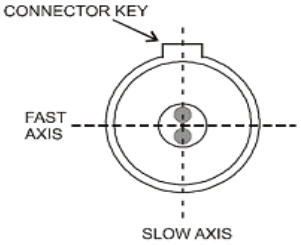
Parameters	Value	Unit
Thermistor type	NTC	-
Resistance @25°C	10 ± 0.1	kOhm
Beta 0-50°C	3375±1%	K



FIBER SPECIFICATION

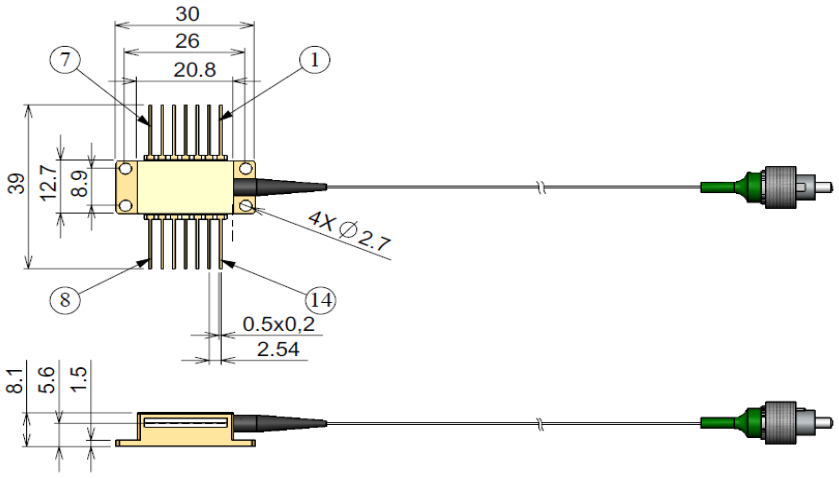
Parameters	HI1060	PM980	Unit
Numerical aperture (Typical)	0.14	0.12	
Cutoff wavelength	920±50	900±70	nm
Mode-field diameter (@1060nm)	6.2±0.3	6.6±0.3	μm
Cladding diameter	125±1	125±1	μm
Coating diameter	245±15	245±15	μm
Length	1.0 ± 0.1	1.0 ± 0.1	m
Connector	FC/APC (narrow key)		

Connector alignment to the PANDA fiber



The output light is polarized along the slow axis of PM fiber.

DIMENSIONS (in mm)



Pin identification:

1	TEC "+"
2	Thermistor
3	-
4	-
5	Thermistor
6	-
7	-
8	-
9	-
10	SLD anode "+"
11	SLD cathode "-"
12	-
13	Case
14	TEC "-"

Innolume GmbH
Konrad-Adenauer-Allee 11, 44263 Dortmund/Germany
Phone: +49 231 47730 200; Web: www.innolume.com

SAFETY AND OPERATING INSTRUCTIONS

The light emitted from this device is invisible and can be harmful to the human eye. Avoid looking directly into the fiber connector when the device is in operation. Proper laser safety eyewear must be worn during operation with open connector.

Absolute Maximum Ratings may be applied to the SLD for short period of time only. Exposure to maximum ratings for extended period of time or exposure to more than one maximum rating may cause damage or affect the reliability of the device. Operating the SLD outside of its maximum ratings may cause device failure or a safety hazard. Power supplies used with the component must be employed such that the maximum forward current cannot be exceeded.

A proper heatsink for the SLD on thermal radiator is required. The SLD must be mounted on radiator with 4 screws (bolt down in X-style fashion with initial torque set to 0.075Nm and final X-style bolt down at 0.15Nm) or with clamps. The deviation from flatness of radiator surface must be less than 0.05mm. It's recommended using of Indium foil or thermal conductive and soft material between bottom of the case and heatsink for thermal interface. It's undesirable to use thermal grease for this.

Avoid back reflection to the SLD. It may give impact on the device performance in aspects of spectrum and power stability. It also may cause fatal SLD facet damage. Using of optical isolators is highly recommended to block back reflection.

Do not pull the fiber. Do not bend a fiber with a radius smaller than 3 cm. Operate the laser module with clean fiber connector only. Periodically check and clean the connector if necessary. To clean the connector use a clean-room compatible tissue only, put some Isopropyl alcohol onto it and carefully clean the facet of the connector, or use special fiber cleaning tools. Perform cleaning only with the laser current switched off.

Electrostatic discharge can lead to device failure. Take necessary precautions to prevent ESD.

Part Number Identification

YY: Optical fiber type
PM – PM980 fiber
HI – HI1060 fiber
Example: SLD-1050-90-PM-35

NOTE: Innolume product specifications are subject to change without notice

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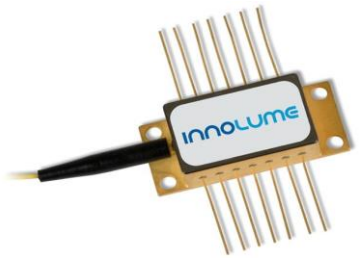
SLD-1060-20-YY-150

Fiber Coupled Superluminescence Diode (SLD)



Features:
- High output power at 1060nm
- Low ripples
- Strong linear polarization
- Individual burn-in and thermal cycling screening
- RoHS compliance

Applications:
- Fiber sensors, instrumentation, spectroscopy

SPECIFICATIONS

Test conditions: CW operation, chip temperature 25°C, the case is mounted on room temperature heatsink

Parameters	Symb.	Min.	Typ.	Max.	Unit
Operating output power	Pout	150			mW
Mean wavelength	λm	1050	1065	1070	nm
Bandwidth @ -3dB	Δλ	18	25		nm
ASE spectrum ripples*			0.04	0.3	dB
Polarization Extinction Ratio	PER	15	20		dB
Operating current	Iop		800	1000	mA
Forward voltage	Vf		1.7	1.9	V

* RMS in 1nm range at ASE maximum, 10pm resolution

TYPICAL SLD PARAMETERS vs. OPERATING CURRENT

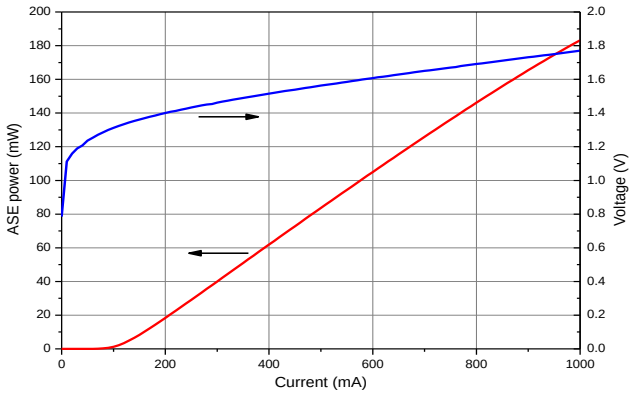
Test conditions: CW operation, chip temperature 25°C, case temperature 25°C

Operating Current, mA	Output power, mW	ASE bandwidth @3dB, nm	Ripples RMS, dB	
200	20	21	0.02	
400	60	23	0.04	
600	100	25	0.05	
800	140	27	0.05	

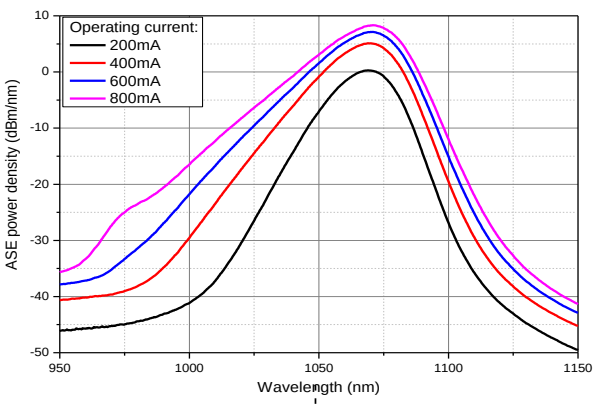
TYPICAL PERFORMANCE for reference only

Test conditions: CW operation, chip temperature 25°C, the case is mounted on room temperature heatsink

Light-Current-Voltage Characteristics



Spectral Characteristics



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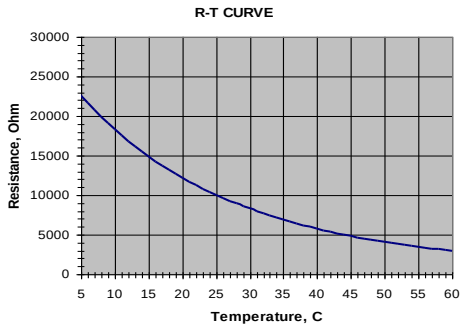
ABSOLUTE MAXIMUM RATINGS

Parameters	Min.	Max.	Unit
SLD reverse voltage	-	2	V
SLD CW forward current	-	1300	mA
Thermo Electric Cooler current	-	3	A
Thermo Electric Cooler voltage	-	4	V
Fiber bend radius	3	-	cm
Chip operating temperature range	5	40	°C
Case operating temperature range	0	70	°C
Storage temperature range	-40	85	°C

THERMISTOR SPECIFICATION

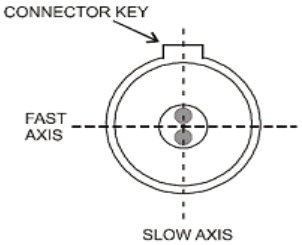
Parameters	Value	Unit
Thermistor type	NTC	-
Resistance @25°C	10 ± 0.1	kOhm
Beta 0-50°C	3375±1%	K



FIBER SPECIFICATION

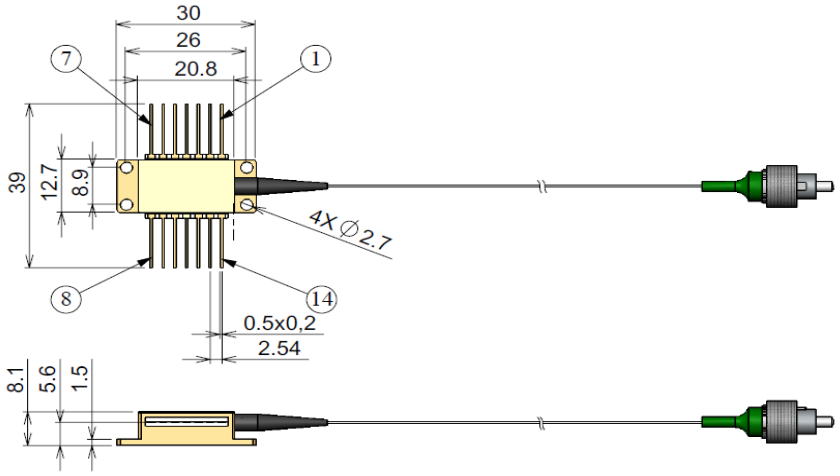
Parameters	HI1060	PM980	Unit
Numerical aperture (Typical)	0.14	0.12	
Cutoff wavelength	920±50	900±70	nm
Mode-field diameter (@1060nm)	6.2±0.3	6.6±0.3	μm
Cladding diameter	125±1	125±1	μm
Coating diameter	245±15	245±15	μm
Length	1.0 ± 0.1	1.0 ± 0.1	m
Connector	FC/APC (narrow key)		

Connector alignment to the PANDA fiber



The output light is polarized along the slow axis of PM fiber.

DIMENSIONS (in mm)



Pin identification:

1	TEC "+"
2	Thermistor
3	-
4	-
5	Thermistor
6	-
7	-
8	-
9	-
10	SLD anode "+"
11	SLD cathode "-"
12	-
13	Case
14	TEC "-"

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SAFETY AND OPERATING INSTRUCTIONS

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Electrostatic discharge can lead to device failure. Take necessary precautions to prevent ESD.

Part Number Identification

YY: Optical fiber type
PM – PM980 fiber
HI – HI1060 fiber
Example: SLD-1060-20-PM-150

NOTE: Innolume product specifications are subject to change without notice

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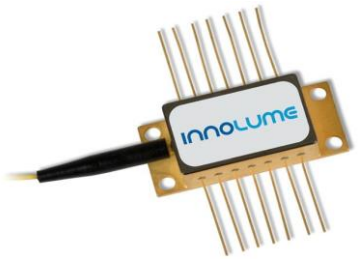
SLD-1060-20-YY-300

Fiber Coupled Superluminescence Diode (SLD)



Features:
- Broadband ASE spectra at 1060nm
- Strong linear polarization
- Individual burn-in and thermal cycling screening
- RoHS compliance

Applications:
- Fiber sensors, instrumentation, spectroscopy

SPECIFICATIONS

Test conditions: CW operation, chip temperature 25°C, the case is mounted on room temperature heatsink

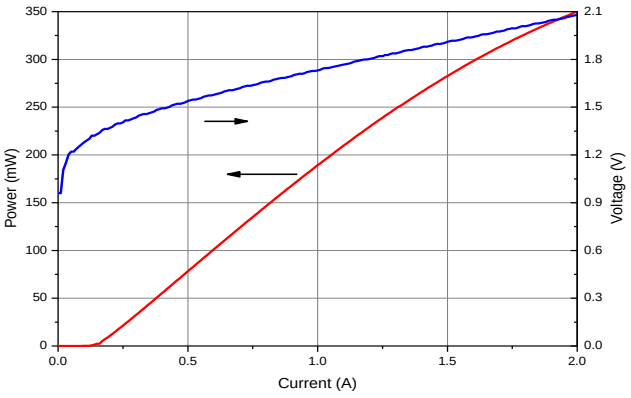
Parameters	Symb.	Min.	Typ.	Max.	Unit
Operating output power	Pout	250	300		mW
ASE mean wavelength	λm	1050	1060	1070	nm
ASE bandwidth @ -3dB	Δλ	15	20		nm
ASE spectrum ripples			0.3	0.5	dB
Polarization Extinction Ratio	PER	15	20		dB
Operating current	Iop		1600	1800	mA
Forward voltage	Vf		2.0	2.2	V

* RMS in 1nm range at ASE maximum, 10pm resolution

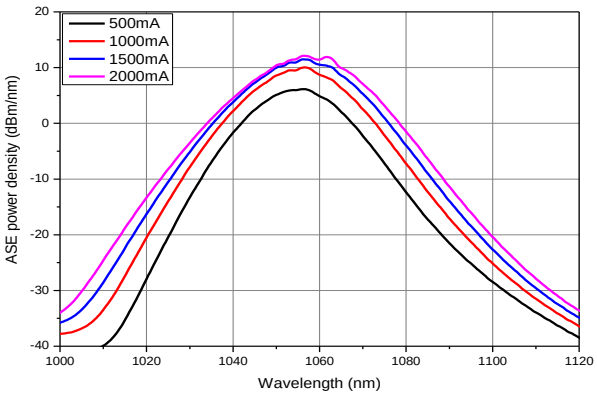
TYPICAL PERFORMANCE for reference only

Test conditions: CW operation, chip temperature 25°C, the case is mounted on room temperature heatsink

Light-Current-Voltage Characteristics



Spectral Characteristics



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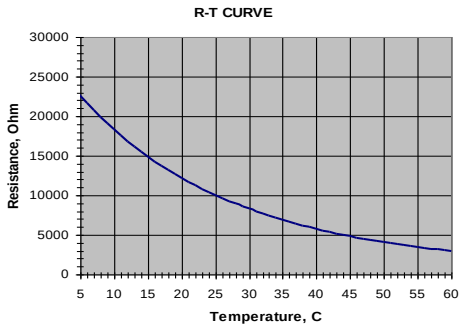
ABSOLUTE MAXIMUM RATINGS

Parameters	Min.	Max.	Unit
SLD reverse voltage	-	2	V
SLD CW forward current	-	2000	mA
Thermo Electric Cooler current	-	3	A
Thermo Electric Cooler voltage	-	4	V
Fiber bend radius	3	-	cm
Chip operating temperature range	5	40	°C
Case operating temperature range	0	70	°C
Storage temperature range	-40	85	°C

THERMISTOR SPECIFICATION

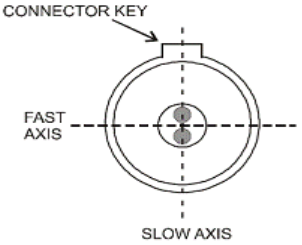
Parameters	Value	Unit
Thermistor type	NTC	-
Resistance @25°C	10 ± 0.1	kOhm
Beta 0-50°C	3375±1%	K



FIBER SPECIFICATION

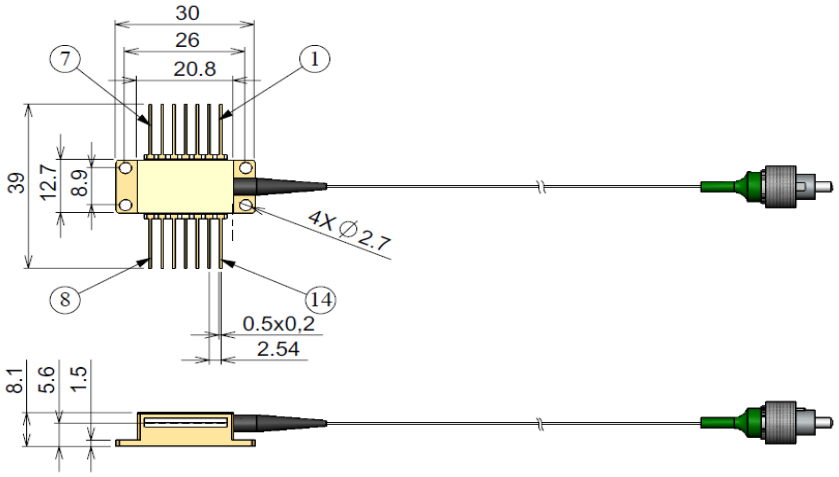
Parameters	HI1060	PM980	Unit
Numerical aperture (Typical)	0.14	0.12	
Cutoff wavelength	920±50	900±70	nm
Mode-field diameter (@1060nm)	6.2±0.3	6.6±0.3	μm
Cladding diameter	125±1	125±1	μm
Coating diameter	245±15	245±15	μm
Length	1.0 ± 0.1	1.0 ± 0.1	m
Connector	FC/APC (narrow key)		

Connector alignment to the PANDA fiber



The output light is polarized along the slow axis of PM fiber.

DIMENSIONS (in mm)



Pin identification:

1	TEC "+"
2	Thermistor
3	-
4	-
5	Thermistor
6	-
7	-
8	-
9	-
10	SLD anode "+"
11	SLD cathode "-"
12	-
13	Case
14	TEC "-"

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SAFETY AND OPERATING INSTRUCTIONS

The light emitted from this device is invisible and can be harmful to the human eye. Avoid looking directly into the fiber connector when the device is in operation. Proper laser safety eyewear must be worn during operation with open connector.

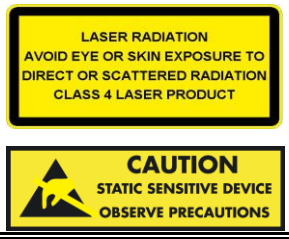
Absolute Maximum Ratings may be applied to the SLD for short period of time only. Exposure to maximum ratings for extended period of time or exposure to more than one maximum rating may cause damage or affect the reliability of the device. Operating the SLD outside of its maximum ratings may cause device failure or a safety hazard. Power supplies used with the component must be employed such that the maximum forward current cannot be exceeded.

A proper heatsink for the SLD on thermal radiator is required. The SLD must be mounted on radiator with 4 screws (bolt down in X-style fashion with initial torque set to 0.075Nm and final X-style bolt down at 0.15Nm) or with clamps. The deviation from flatness of radiator surface must be less than 0.05mm. It's recommended using of Indium foil or thermal conductive and soft material between bottom of the case and heatsink for thermal interface. It's undesirable to use thermal grease for this.

Avoid back reflection to the SLD. It may give impact on the device performance in aspects of spectrum and power stability. It also may cause fatal SLD facet damage. Using of optical isolators is highly recommended to block back reflection.

Do not pull the fiber. Do not bend a fiber with a radius smaller than 3 cm. Operate the laser module with clean fiber connector only. Periodically check and clean the connector if necessary. To clean the connector use a clean-room compatible tissue only, put some Isopropyl alcohol onto it and carefully clean the facet of the connector, or use special fiber cleaning tools. Perform cleaning only with the laser current switched off.

Electrostatic discharge can lead to device failure. Take necessary precautions to prevent ESD.



Part Number Identification

YY: Optical fiber type
PM – PM980 fiber
HI – HI1060 fiber
Example: SLD-1060-20-PM-300

NOTE: Innolume product specifications are subject to change without notice

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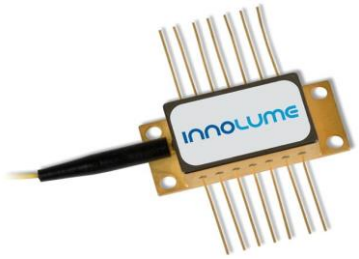
SLD-1080-30-YY-100

Fiber Coupled Superluminescence Diode (SLD)



Features:
- High output power at 1080nm
- Low ripples
- Strong linear polarization
- Individual burn-in and thermal cycling screening
- RoHS compliance

Applications:
- Fiber sensors, instrumentation, spectroscopy

SPECIFICATIONS

Test conditions: CW operation, chip temperature 25°C, the case is mounted on room temperature heatsink

Parameters	Symb.	Min.	Typ.	Max.	Unit
Operating output power	Pout	100			mW
Mean wavelength	λm	1070	1080	1090	nm
Bandwidth @ -3dB	Δλ	20	30		nm
ASE spectrum ripples*			0.03	0.3	dB
Polarization Extinction Ratio	PER	15	20		dB
Operating current	Iop		800	1000	mA
Forward voltage	Vf		1.7	1.9	V

* RMS in 1nm range at ASE maximum, 10pm resolution

TYPICAL SLD PARAMETERS vs. OPERATING CURRENT

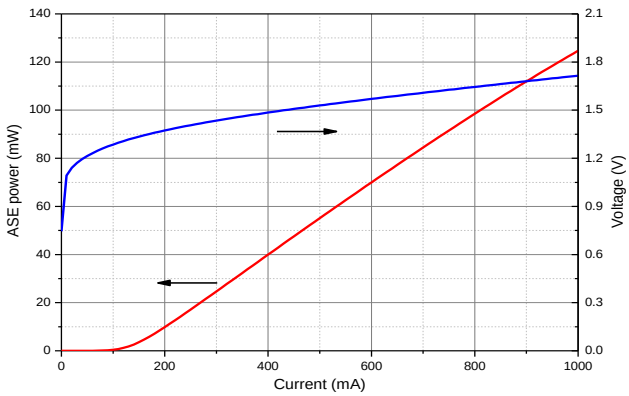
Test conditions: CW operation, chip temperature 25°C, case temperature 25°C

Operating Current, mA	Output power, mW	ASE bandwidth @3dB, nm	Ripples RMS, dB	
200	10	26	0.01	
400	40	28	0.03	
600	70	30	0.03	
800	100	32	0.05	

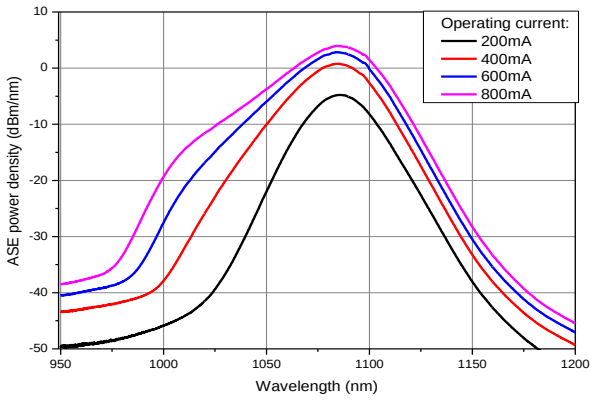
TYPICAL PERFORMANCE for reference only

Test conditions: CW operation, chip temperature 25°C, the case is mounted on room temperature heatsink

Light-Current-Voltage Characteristics



Spectral Characteristics



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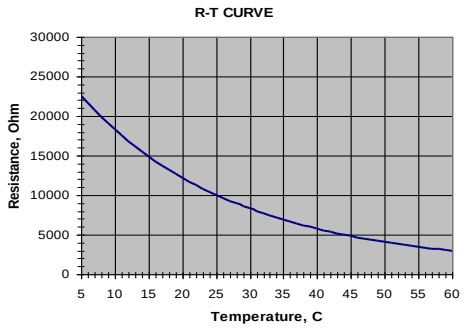
ABSOLUTE MAXIMUM RATINGS

Parameters	Min.	Max.	Unit
SLD reverse voltage	-	2	V
SLD CW forward current	-	1300	mA
Thermo Electric Cooler current	-	3	A
Thermo Electric Cooler voltage	-	4	V
Fiber bend radius	3	-	cm
Chip operating temperature range	5	40	°C
Case operating temperature range	0	70	°C
Storage temperature range	-40	85	°C

THERMISTOR SPECIFICATION

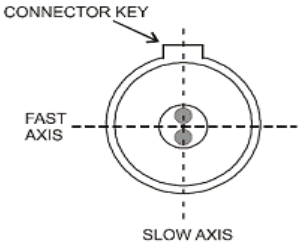
Parameters	Value	Unit
Thermistor type	NTC	-
Resistance @25°C	10 ± 0.1	kOhm
Beta 0-50°C	3375±1%	K



FIBER SPECIFICATION

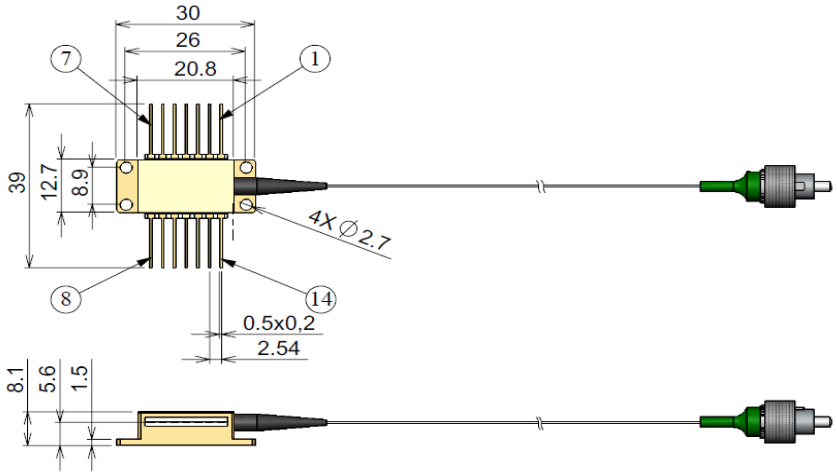
Parameters	HI1060	PM980	Unit
Numerical aperture (Typical)	0.14	0.12	
Cutoff wavelength	920±50	900±70	nm
Mode-field diameter (@1060nm)	6.2±0.3	6.6±0.3	μm
Cladding diameter	125±1	125±1	μm
Coating diameter	245±15	245±15	μm
Length	1.0 ± 0.1	1.0 ± 0.1	m
Connector	FC/APC (narrow key)		

Connector alignment to the PANDA fiber



The output light is polarized along the slow axis of PM fiber.

DIMENSIONS (in mm)



Pin identification:

1	TEC "+"
2	Thermistor
3	-
4	-
5	Thermistor
6	-
7	-
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9	-
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SAFETY AND OPERATING INSTRUCTIONS

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Part Number Identification

YY: Optical fiber type
PM – PM980 fiber
HI – HI1060 fiber
Example: SLD-1080-30-PM-100

NOTE: Innolume product specifications are subject to change without notice

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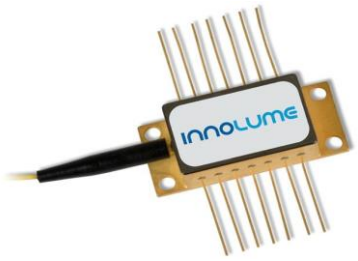
SLD-1130-20-YY-30

Fiber Coupled Superluminescence Diode (SLD)



Features:
- Broadband ASE spectra at 1130nm
- Strong linear polarization
- Individual burn-in and thermal cycling screening
- RoHS compliance

Applications:
- Fiber sensors, instrumentation, spectroscopy

SPECIFICATIONS

Test conditions: CW operation, chip temperature 25°C, the case is mounted on room temperature heatsink

Parameters	Symb.	Min.	Typ.	Max.	Unit
Operating output power	Pout	20	30		mW
ASE mean wavelength	λm	1115	1125	1135	nm
ASE bandwidth @ -3dB	Δλ	20	27		nm
ASE spectrum ripples*			0.03	0.3	dB
Polarization Extinction Ratio	PER	15	20		dB
Operating current	Iop		600	700	mA
Forward voltage	Vf		1.5	1.7	V

* RMS in 1nm range at ASE maximum, 10pm resolution

TYPICAL SLD PARAMETERS vs. OPERATING CURRENT

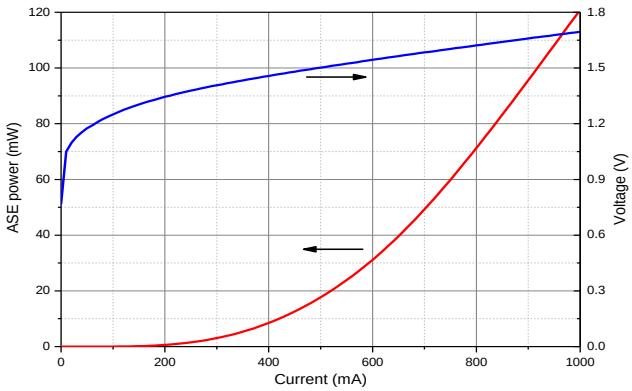
Test conditions: CW operation, chip temperature 25°C, case temperature 25°C

Operating Current, mA	Output power, mW	ASE bandwidth @3dB, nm	Ripples RMS, dB	
200	0.6	25	0.01	
400	8	27	0.03	
600	30	28	0.03	
800	70	28	0.05	

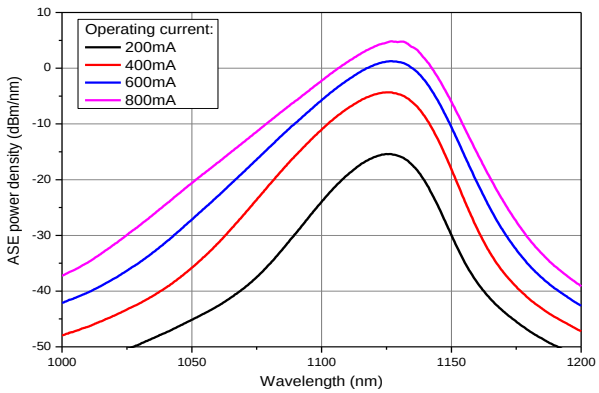
TYPICAL PERFORMANCE for reference only

Test conditions: CW operation, chip temperature 25°C, the case is mounted on room temperature heatsink

Light-Current-Voltage Characteristics



Spectral Characteristics



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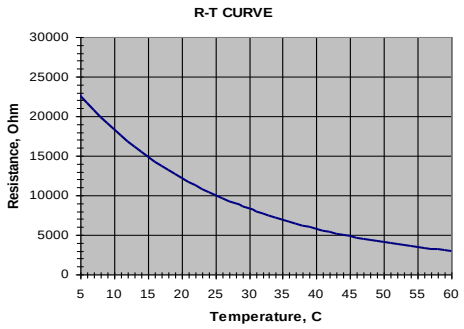
ABSOLUTE MAXIMUM RATINGS

Parameters	Min.	Max.	Unit
SLD reverse voltage	-	2	V
SLD CW forward current	-	1000	mA
Thermo Electric Cooler current	-	3	A
Thermo Electric Cooler voltage	-	4	V
Fiber bend radius	3	-	cm
Chip operating temperature range	5	40	°C
Case operating temperature range	0	70	°C
Storage temperature range	-40	85	°C

THERMISTOR SPECIFICATION

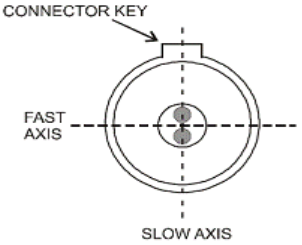
Parameters	Value	Unit
Thermistor type	NTC	-
Resistance @25°C	10 ± 0.1	kOhm
Beta 0-50°C	3375±1%	K



FIBER SPECIFICATION

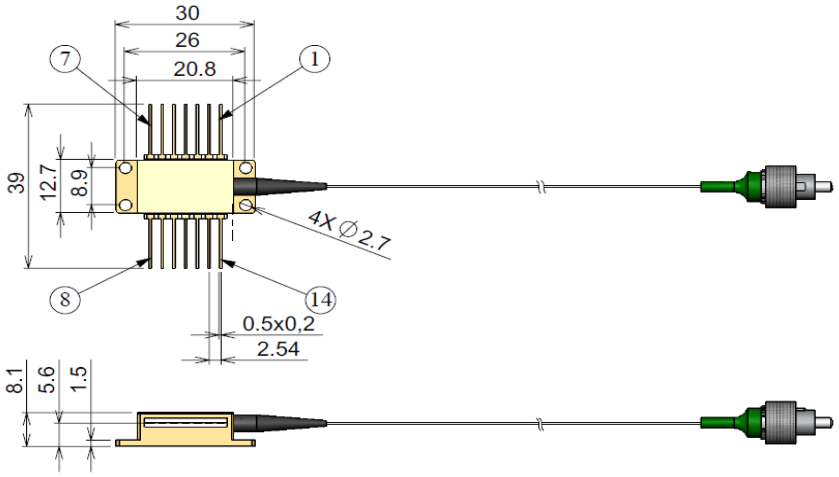
Parameters	HI1060	PM980	Unit
Numerical aperture (Typical)	0.14	0.12	
Cutoff wavelength	920±50	900±70	nm
Mode-field diameter (@1060nm)	6.2±0.3	6.6±0.3	μm
Cladding diameter	125±1	125±1	μm
Coating diameter	245±15	245±15	μm
Length	1.0 ± 0.1	1.0 ± 0.1	m
Connector	FC/APC (narrow key)		

Connector alignment to the PANDA fiber



The output light is polarized along the slow axis of PM fiber.

DIMENSIONS (in mm)



Pin identification:

1	TEC "+"
2	Thermistor
3	-
4	-
5	Thermistor
6	-
7	-
8	-
9	-
10	SLD anode "+"
11	SLD cathode "-"
12	-
13	Case
14	TEC "-"

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SAFETY AND OPERATING INSTRUCTIONS

The light emitted from this device is invisible and can be harmful to the human eye. Avoid looking directly into the fiber connector when the device is in operation. Proper laser safety eyewear must be worn during operation with open connector.

Absolute Maximum Ratings may be applied to the SLD for short period of time only. Exposure to maximum ratings for extended period of time or exposure to more than one maximum rating may cause damage or affect the reliability of the device. Operating the SLD outside of its maximum ratings may cause device failure or a safety hazard. Power supplies used with the component must be employed such that the maximum forward current cannot be exceeded.

A proper heatsink for the SLD on thermal radiator is required. The SLD must be mounted on radiator with 4 screws (bolt down in X-style fashion with initial torque set to 0.075Nm and final X-style bolt down at 0.15Nm) or with clamps. The deviation from flatness of radiator surface must be less than 0.05mm. It's recommended using of Indium foil or thermal conductive and soft material between bottom of the case and heatsink for thermal interface. It's undesirable to use thermal grease for this.

Avoid back reflection to the SLD. It may give impact on the device performance in aspects of spectrum and power stability. It also may cause fatal SLD facet damage. Using of optical isolators is highly recommended to block back reflection.

Do not pull the fiber. Do not bend a fiber with a radius smaller than 3 cm. Operate the laser module with clean fiber connector only. Periodically check and clean the connector if necessary. To clean the connector use a clean-room compatible tissue only, put some Isopropyl alcohol onto it and carefully clean the facet of the connector, or use special fiber cleaning tools. Perform cleaning only with the laser current switched off.

Electrostatic discharge can lead to device failure. Take necessary precautions to prevent ESD.

Part Number Identification

YY: Optical fiber type
PM – PM980 fiber
HI – HI1060 fiber
Example: SLD-1130-20-PM-30

NOTE: Innolume product specifications are subject to change without notice

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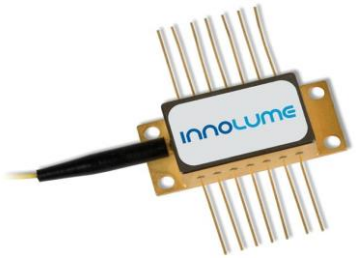
SLD-1140-80-YY-1

Fiber Coupled Superluminescence Diode (SLD)



Features:
- Broadband ASE spectra (1080-1190nm)
- Strong linear polarization
- Individual burn-in and thermal cycling screening
- RoHS compliance

Applications:
- Fiber sensors, instrumentation, spectroscopy

SPECIFICATIONS

Test conditions: CW operation, chip temperature 25°C, the case is mounted on room temperature heatsink

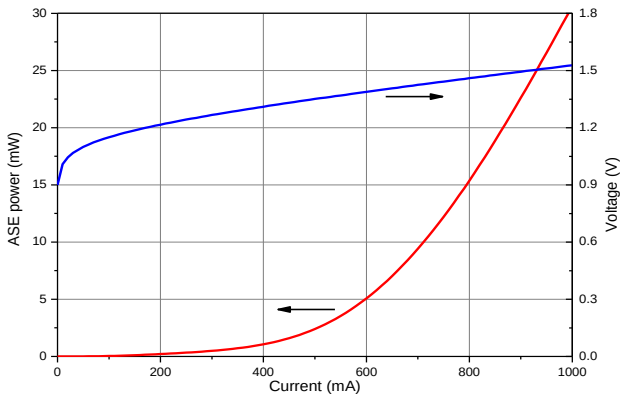
Parameters	Symb.	Min.	Typ.	Max.	Unit
Operating output power	Pout	0.5	1.0		mW
ASE mean wavelength	λm	1130	1140	1150	nm
ASE bandwidth @ -3dB	Δλ	70	85		nm
Amplitude of ASE spectrum dip			4	6	dB
ASE ground state maximum position	λg	1160	1170	1180	nm
ASE excited state maximum position	λe	1100	1110	1120	nm
ASE spectrum ripples			0.05	0.1	dB
Polarization Extinction Ratio	PER	15	20		dB
Operating current	Iop		400	500	mA
Forward voltage	Vf		1.3	1.5	V

* RMS in 1nm range at ASE maximum, 10pm resolution

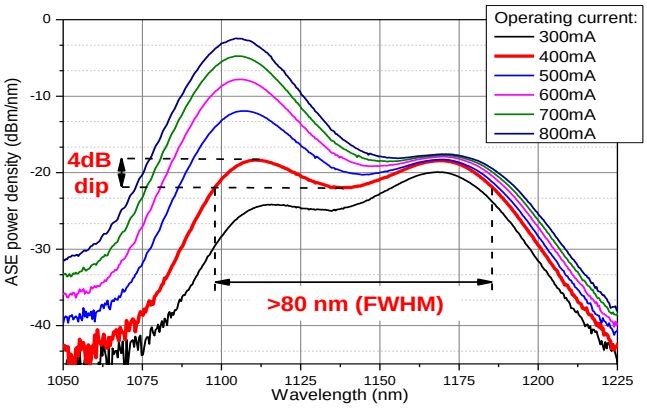
TYPICAL PERFORMANCE for reference only

Test conditions: CW operation, chip temperature 25°C, the case is mounted on room temperature heatsink

Light-Current-Voltage Characteristics



Spectral Characteristics



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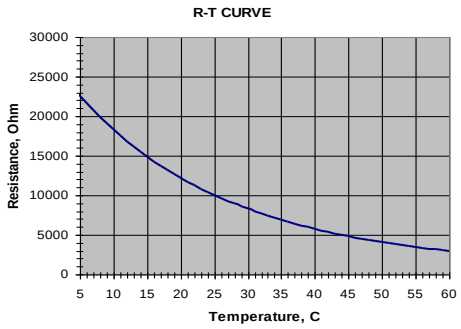
ABSOLUTE MAXIMUM RATINGS

Parameters	Min.	Max.	Unit
SLD reverse voltage	-	2	V
SLD CW forward current	-	Iop+300	mA
Thermo Electric Cooler current	-	3	A
Thermo Electric Cooler voltage	-	4	V
Fiber bend radius	3	-	cm
Chip operating temperature range	5	40	°C
Case operating temperature range	0	70	°C
Storage temperature range	-40	85	°C

THERMISTOR SPECIFICATION

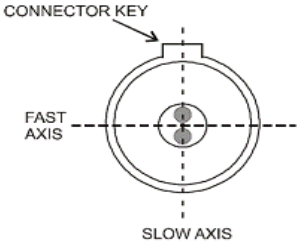
Parameters	Value	Unit
Thermistor type	NTC	-
Resistance @25°C	10 ± 0.1	kOhm
Beta 0-50°C	3375±1%	K



FIBER SPECIFICATION

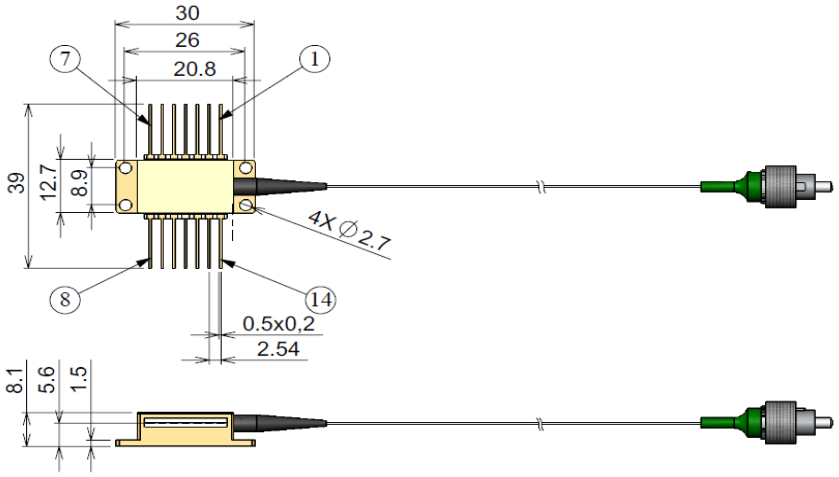
Parameters	HI1060	PM980	Unit
Numerical aperture (Typical)	0.14	0.12	
Cutoff wavelength	920±50	900±70	nm
Mode-field diameter (@1060nm)	6.2±0.3	6.6±0.3	μm
Cladding diameter	125±1	125±1	μm
Coating diameter	245±15	245±15	μm
Length	1.0 ± 0.1	1.0 ± 0.1	m
Connector	FC/APC (narrow key)		

Connector alignment to the PANDA fiber



The output light is polarized along the slow axis of PM fiber.

DIMENSIONS (in mm)



Pin identification:

1	TEC "+"
2	Thermistor
3	-
4	-
5	Thermistor
6	-
7	-
8	-
9	-
10	SLD anode "+"
11	SLD cathode "-"
12	-
13	Case
14	TEC "-"

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SAFETY AND OPERATING INSTRUCTIONS

The light emitted from this device is invisible and can be harmful to the human eye. Avoid looking directly into the fiber connector when the device is in operation. Proper laser safety eyewear must be worn during operation with open connector.

Absolute Maximum Ratings may be applied to the SLD for short period of time only. Exposure to maximum ratings for extended period of time or exposure to more than one maximum rating may cause damage or affect the reliability of the device. Operating the SLD outside of its maximum ratings may cause device failure or a safety hazard. Power supplies used with the component must be employed such that the maximum forward current cannot be exceeded.

A proper heatsink for the SLD on thermal radiator is required. The SLD must be mounted on radiator with 4 screws (bolt down in X-style fashion with initial torque set to 0.075Nm and final X-style bolt down at 0.15Nm) or with clamps. The deviation from flatness of radiator surface must be less than 0.05mm. It's recommended using of Indium foil or thermal conductive and soft material between bottom of the case and heatsink for thermal interface. It's undesirable to use thermal grease for this.

Avoid back reflection to the SLD. It may give impact on the device performance in aspects of spectrum and power stability. It also may cause fatal SLD facet damage. Using of optical isolators is highly recommended to block back reflection.

Do not pull the fiber. Do not bend a fiber with a radius smaller than 3 cm. Operate the laser module with clean fiber connector only. Periodically check and clean the connector if necessary. To clean the connector use a clean-room compatible tissue only, put some Isopropyl alcohol onto it and carefully clean the facet of the connector, or use special fiber cleaning tools. Perform cleaning only with the laser current switched off.

Electrostatic discharge can lead to device failure. Take necessary precautions to prevent ESD.

Part Number Identification

YY: Optical fiber type
PM – PM980 fiber
HI – HI1060 fiber
Example: SLD-1140-80-PM-1

NOTE: Innolume product specifications are subject to change without notice

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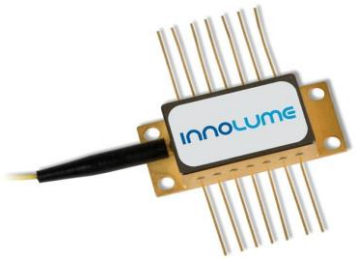
SLD-1190-90-YY-1

Fiber Coupled Superluminescence Diode (SLD)



Features:
- Broadband ASE spectra (1140-1250nm)
- Strong linear polarization
- Individual burn-in and thermal cycling screening
- RoHS compliance

Applications:
- Fiber sensors, instrumentation, spectroscopy

SPECIFICATIONS

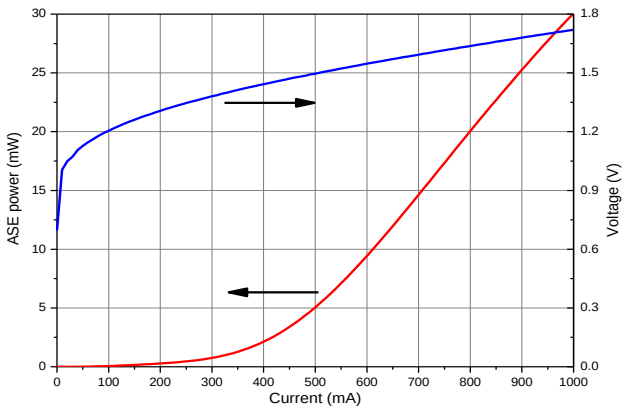
Test conditions: CW operation, chip temperature 25°C, the case is mounted on room temperature heatsink

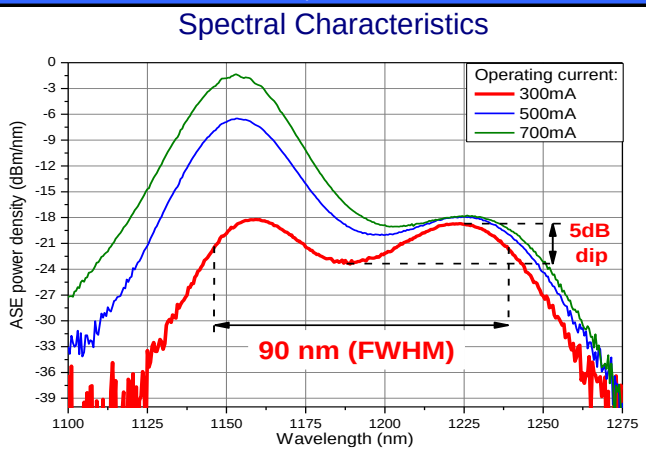
Parameters	Symb.	Min.	Typ.	Max.	Unit
Operating output power	Pout	0.5	1.0		mW
ASE mean wavelength	λm	1180	1190	1200	nm
ASE bandwidth @ -3dB	Δλ	75	90		nm
Amplitude of ASE spectrum dip			5	10	dB
ASE ground state maximum position	λg	1215	1225	1235	nm
ASE excited state maximum position	λe	1150	1160	1170	nm
ASE spectrum ripples			0.02	0.1	dB
Polarization Extinction Ratio	PER	15	20		dB
Operating current	Iop		300	400	mA
Forward voltage	Vf		1.4	1.6	V

* RMS in 1nm range at ASE maximum, 10pm resolution

TYPICAL PERFORMANCE for reference only

Test conditions: CW operation, chip temperature 25°C, the case is mounted on room temperature heatsink





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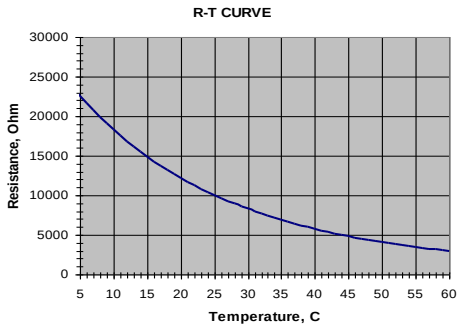
ABSOLUTE MAXIMUM RATINGS

Parameters	Min.	Max.	Unit
SLD reverse voltage	-	2	V
SLD CW forward current	-	Iop+300	mA
Thermo Electric Cooler current	-	3	A
Thermo Electric Cooler voltage	-	4	V
Fiber bend radius	3	-	cm
Chip operating temperature range	5	40	°C
Case operating temperature range	0	70	°C
Storage temperature range	-40	85	°C

THERMISTOR SPECIFICATION

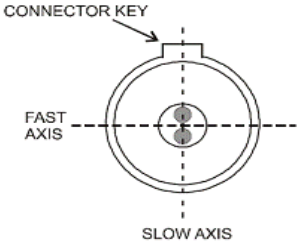
Parameters	Value	Unit
Thermistor type	NTC	-
Resistance @25°C	10 ± 0.1	kOhm
Beta 0-50°C	3375±1%	K



FIBER SPECIFICATION

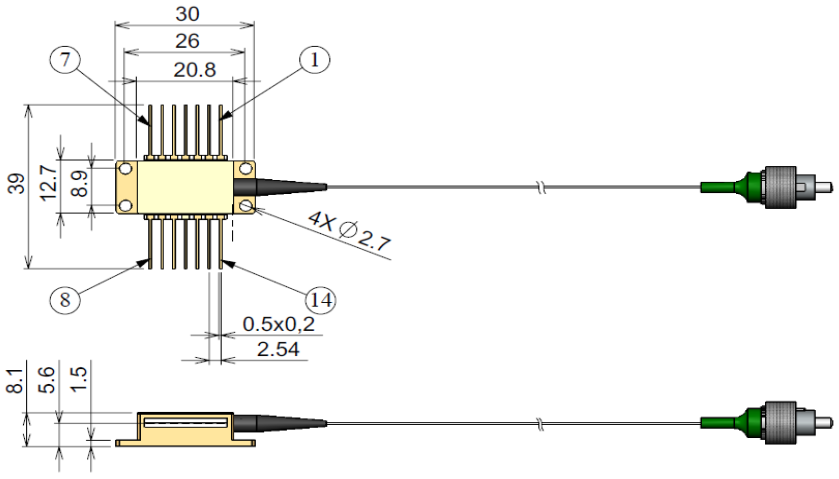
Parameters	HI1060	PM980	Unit
Numerical aperture (Typical)	0.14	0.12	
Cutoff wavelength	920±50	900±70	nm
Mode-field diameter (@1060nm)	6.2±0.3	6.6±0.3	µm
Cladding diameter	125±1	125±1	µm
Coating diameter	245±15	245±15	µm
Length	1.0 ± 0.1	1.0 ± 0.1	m
Connector	FC/APC (narrow key)		

Connector alignment to the PANDA fiber



The output light is polarized along the slow axis of PM fiber.

DIMENSIONS (in mm)



Pin identification:

1	TEC "+"
2	Thermistor
3	-
4	-
5	Thermistor
6	-
7	-
8	-
9	-
10	SLD anode "+"
11	SLD cathode "-"
12	-
13	Case
14	TEC "-"

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SAFETY AND OPERATING INSTRUCTIONS

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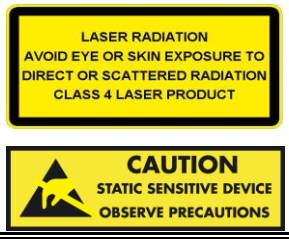
A proper heatsink for the SLD on thermal radiator is required. The SLD must be mounted on radiator with 4 screws (bolt down in X-style fashion with initial torque set to 0.075Nm and final X-style bolt down at 0.15Nm) or with clamps. The deviation from flatness of radiator surface must be less than 0.05mm. It's recommended using of Indium foil or thermal conductive and soft material between bottom of the case and heatsink for thermal interface. It's undesirable to use thermal grease for this.

Avoid back reflection to the SLD. It may give impact on the device performance in aspects of spectrum and power stability. It also may cause fatal SLD facet damage. Using of optical isolators is highly recommended to block back reflection.

Do not pull the fiber. Do not bend a fiber with a radius smaller than 3 cm. Operate the laser module with clean fiber connector only. Periodically check and clean the connector if necessary. To clean the connector use a clean-room compatible tissue only, put some Isopropyl alcohol onto it and carefully clean the facet of the connector, or use special fiber cleaning tools. Perform cleaning only with the laser current switched off.

Electrostatic discharge can lead to device failure. Take necessary precautions to prevent ESD.



Part Number Identification

YY: Optical fiber type
PM – PM980 fiber
HI – HI1060 fiber
Example: SLD-1190-90-PM-1

NOTE: Innolume product specifications are subject to change without notice

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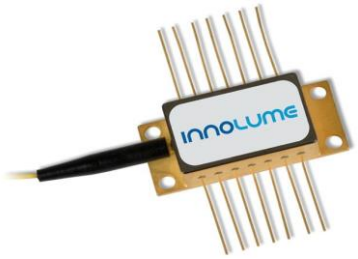
SLD-1250-110-YY-5

Fiber Coupled Superluminescence Diode (SLD)



Features:
- Ultra broadband ASE spectra (1180-1320nm)
- Strong linear polarization
- Individual burn-in and thermal cycling screening
- RoHS compliance

Applications:
- Fiber sensors, instrumentation, spectroscopy

SPECIFICATIONS

Test conditions: CW operation, chip temperature 25°C, the case is mounted on room temperature heatsink

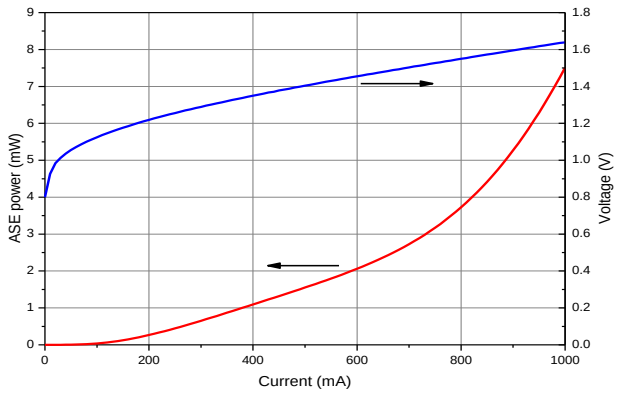
Parameters	Symb.	Min.	Typ.	Max.	Unit
Operating output power	Pout	3	4		mW
ASE mean wavelength	λm	1240	1250	1260	nm
ASE bandwidth @ -3dB	Δλ	90	110		nm
Amplitude of ASE spectrum dip			6	10	dB
ASE ground state maximum position	λg	1270	1280	1290	nm
ASE excited state maximum position	λe	1200	1210	1220	nm
ASE spectrum ripples			0.05	0.1	dB
Polarization Extinction Ratio	PER	15	20		dB
Operating current	Iop		800	900	mA
Forward voltage	Vf		1.6	1.9	V

* RMS in 1nm range at ASE maximum, 10pm resolution

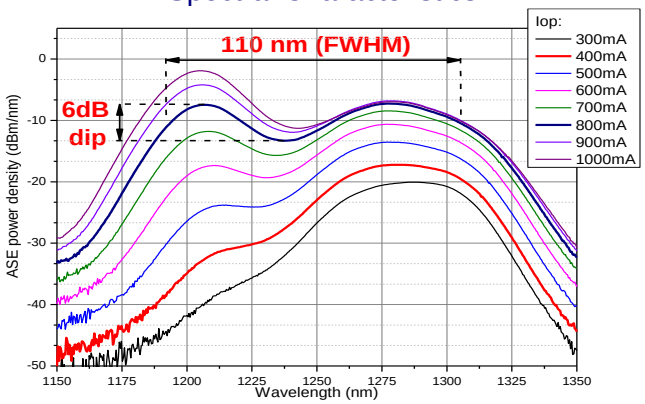
TYPICAL PERFORMANCE for reference only

Test conditions: CW operation, chip temperature 25°C, the case is mounted on room temperature heatsink

Light-Current-Voltage Characteristics



Spectral Characteristics



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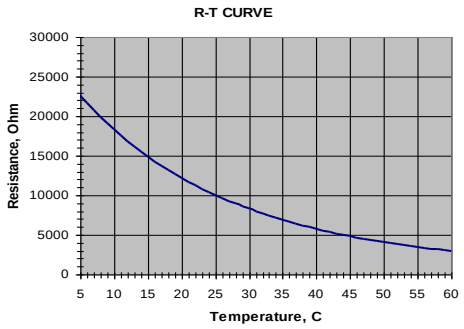
ABSOLUTE MAXIMUM RATINGS

Parameters	Min.	Max.	Unit
SLD reverse voltage	-	2	V
SLD CW forward current	-	Iop+300	mA
Thermo Electric Cooler current	-	3	A
Thermo Electric Cooler voltage	-	4	V
Fiber bend radius	3	-	cm
Chip operating temperature range	5	40	°C
Case operating temperature range	0	70	°C
Storage temperature range	-40	85	°C

THERMISTOR SPECIFICATION

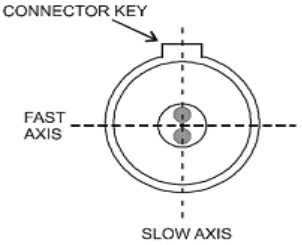
Parameters	Value	Unit
Thermistor type	NTC	-
Resistance @25°C	10 ± 0.1	kOhm
Beta 0-50°C	3375±1%	K



FIBER SPECIFICATION

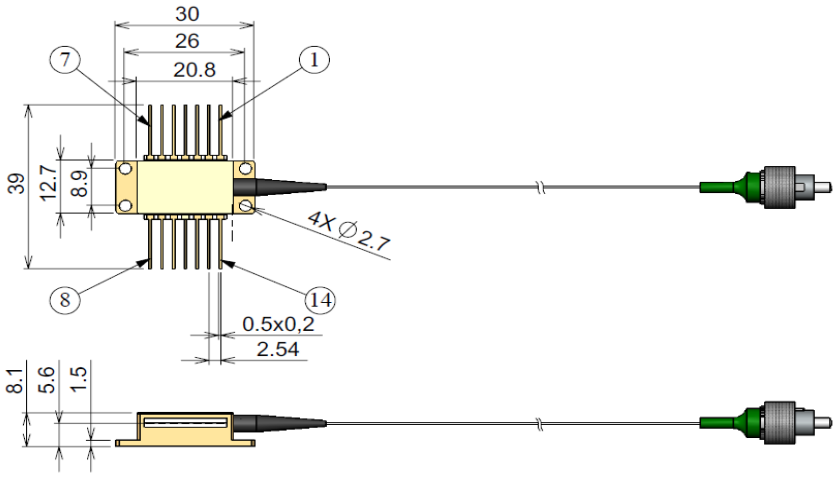
Parameters	HI1060	PM980	Unit
Numerical aperture (Typical)	0.14	0.12	
Cutoff wavelength	920±50	900±70	nm
Mode-field diameter (@1060nm)	6.2±0.3	6.6±0.3	μm
Cladding diameter	125±1	125±1	μm
Coating diameter	245±15	245±15	μm
Length	1.0 ± 0.1	1.0 ± 0.1	m
Connector	FC/APC (narrow key)		

Connector alignment to the PANDA fiber



The output light is polarized along the slow axis of PM fiber.

DIMENSIONS (in mm)



Pin identification:

1	TEC "+"
2	Thermistor
3	-
4	-
5	Thermistor
6	-
7	-
8	-
9	-
10	SLD anode "+"
11	SLD cathode "-"
12	-
13	Case
14	TEC "-"

Innolume GmbH
Konrad-Adenauer-Allee 11, 44263 Dortmund/Germany
Phone: +49 231 47730 200; Web: www.innolume.com

SAFETY AND OPERATING INSTRUCTIONS

The light emitted from this device is invisible and can be harmful to the human eye. Avoid looking directly into the fiber connector when the device is in operation. Proper laser safety eyewear must be worn during operation with open connector.

Absolute Maximum Ratings may be applied to the SLD for short period of time only. Exposure to maximum ratings for extended period of time or exposure to more than one maximum rating may cause damage or affect the reliability of the device. Operating the SLD outside of its maximum ratings may cause device failure or a safety hazard. Power supplies used with the component must be employed such that the maximum forward current cannot be exceeded.

A proper heatsink for the SLD on thermal radiator is required. The SLD must be mounted on radiator with 4 screws (bolt down in X-style fashion with initial torque set to 0.075Nm and final X-style bolt down at 0.15Nm) or with clamps. The deviation from flatness of radiator surface must be less than 0.05mm. It's recommended using of Indium foil or thermal conductive and soft material between bottom of the case and heatsink for thermal interface. It's undesirable to use thermal grease for this.

Avoid back reflection to the SLD. It may give impact on the device performance in aspects of spectrum and power stability. It also may cause fatal SLD facet damage. Using of optical isolators is highly recommended to block back reflection.

Do not pull the fiber. Do not bend a fiber with a radius smaller than 3 cm. Operate the laser module with clean fiber connector only. Periodically check and clean the connector if necessary. To clean the connector use a clean-room compatible tissue only, put some Isopropyl alcohol onto it and carefully clean the facet of the connector, or use special fiber cleaning tools. Perform cleaning only with the laser current switched off.

Electrostatic discharge can lead to device failure. Take necessary precautions to prevent ESD.

Part Number Identification

YY: Optical fiber type
PM – PM980 fiber
HI – HI1060 fiber
Example: SLD-1250-110-PM-5

NOTE: Innolume product specifications are subject to change without notice

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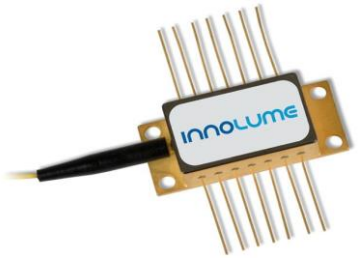
SLD-1280-50-YY-1

Fiber Coupled Superluminescence Diode (SLD)



Features:
- Broadband ASE spectra (1250-1310nm)
- Strong linear polarization
- Individual burn-in and thermal cycling screening
- RoHS compliance

Applications:
- Fiber sensors, instrumentation, spectroscopy

SPECIFICATIONS

Test conditions: CW operation, chip temperature 25°C, the case is mounted on room temperature heatsink

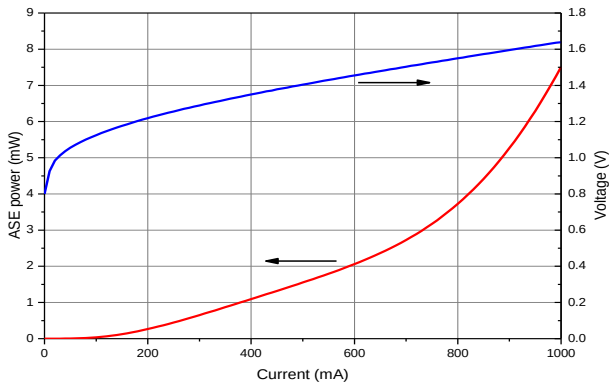
Parameters	Symb.	Min.	Typ.	Max.	Unit
Operating output power	Pout	0.7	1.2		mW
ASE mean wavelength	λm	1270	1280	1290	nm
ASE bandwidth @ -3dB	Δλ	40	50		nm
ASE spectrum ripples			0.02	0.1	dB
Polarization Extinction Ratio	PER	15	20		dB
Operating current	Iop		400	500	mA
Forward voltage	Vf		1.4	1.6	V

* RMS in 1nm range at ASE maximum, 10pm resolution

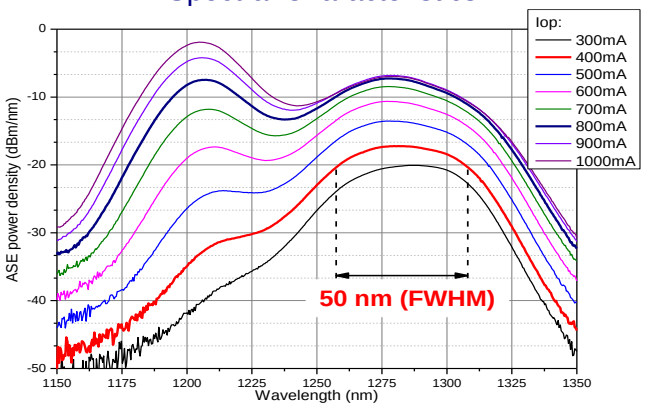
TYPICAL PERFORMANCE for reference only

Test conditions: CW operation, chip temperature 25°C, the case is mounted on room temperature heatsink

Light-Current-Voltage Characteristics



Spectral Characteristics



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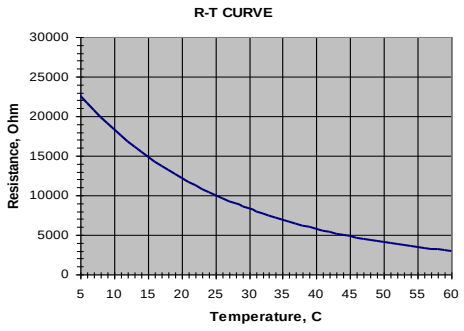
ABSOLUTE MAXIMUM RATINGS

Parameters	Min.	Max.	Unit
SLD reverse voltage	-	2	V
SLD CW forward current	-	Iop+300	mA
Thermo Electric Cooler current	-	3	A
Thermo Electric Cooler voltage	-	4	V
Fiber bend radius	3	-	cm
Chip operating temperature range	5	40	°C
Case operating temperature range	0	70	°C
Storage temperature range	-40	85	°C

THERMISTOR SPECIFICATION

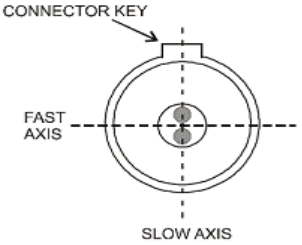
Parameters	Value	Unit
Thermistor type	NTC	-
Resistance @25°C	10 ± 0.1	kOhm
Beta 0-50°C	3375±1%	K



FIBER SPECIFICATION

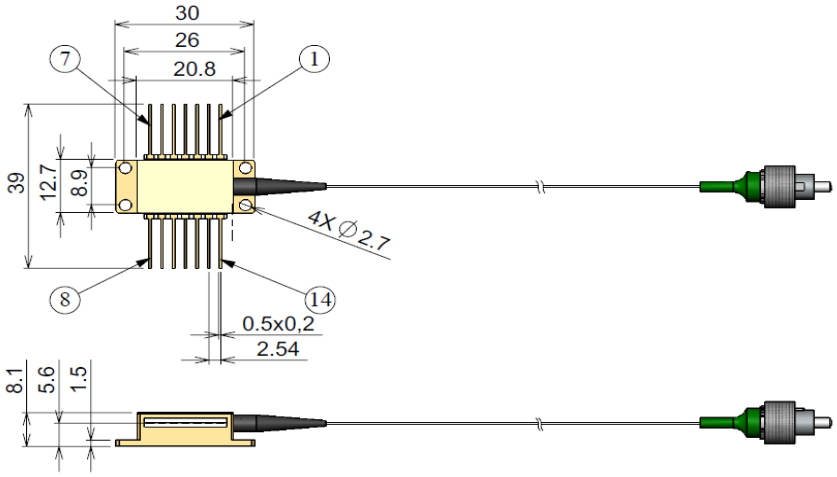
Parameters	HI1060	PM980	Unit
Numerical aperture (Typical)	0.14	0.12	
Cutoff wavelength	920±50	900±70	nm
Mode-field diameter (@1060nm)	6.2±0.3	6.6±0.3	μm
Cladding diameter	125±1	125±1	μm
Coating diameter	245±15	245±15	μm
Length	1.0 ± 0.1	1.0 ± 0.1	m
Connector	FC/APC (narrow key)		

Connector alignment to the PANDA fiber



The output light is polarized along the slow axis of PM fiber.

DIMENSIONS (in mm)



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