#### **Product Specification, Revision 1.42**



# Super-Luminescent Light Emitting Diode Device

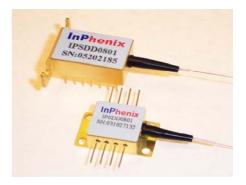
# IPSDD080X (820nm)

#### Features

- Wide Optical Bandwidth
- Very Low Spectral Ripple
- High Output Power in SM/or PM Fiber

#### **Applications**

- Broadband Light Source
- Fiber Optic Sensor (FOS)
- Biomedical Imaging Device
- Optical Coherence Tomography (OCT)



# IPSDD0801 – FOS-type SLED Device Specifications

Parameter	Symbol	Min.	Тур.	Max.	Unit
Peak Wavelength	$\lambda_{\rm p}$	805	820	830	nm
3 dB Bandwidth	$\Delta\lambda_{3dB}$	15			nm
Output Power in SM Fiber	Po	0.3			mW
Spectral Modulation Depth p-p				4	%
Spectral Modulation Depth p-p	Δ			0.17	dB
Operating Current	I <sub>F</sub>		120		mA
Back Facet Monitor	Available upon request				

#### **IPSDD0802 – OCT-type SLED Device Specifications**

Parameter	Symbol	Min.	Тур.	Max.	Unit
Peak Wavelength	$\lambda_{\rm p}$	805	820	830	nm
3 dB Bandwidth	$\Delta\lambda_{3dB}$	22	25		nm
Output Power in SM Fiber	Po	2.0	2.5		mW
Spectral Modulation Depth p-p	٨			4	%
Spectral Woddlation Depth p-p	Δ			0.17	dB
Operating Current	I <sub>F</sub>			160	mA
Back Facet Monitor	Available upon request				

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## **IPSDD0803 – OCT-type SLED Device Specifications**

Parameter	Symbol	Min.	Typ.	Max.	Unit
Peak Wavelength	$\lambda_{\rm p}$	805	820	830	nm
3 dB Bandwidth	$\Delta\lambda_{3dB}$	40			nm
Output Power in SM Fiber	Po	4.0	5.0		mW
Spectral Modulation Depth p-p	٨			4	%
Spectral Modulation Depth p-p	Δ			0.17	dB
Operating Current	I <sub>F</sub>		200	220	mA
Back Facet Monitor	Available upon request				

Standard 14-pin BUT package

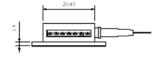
## **Absolute Maximum Ratings**

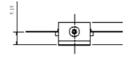
Parameter	Min.	Max.	Unit
Operating Temperature	-20	70	°C
Storage Temperature	- 40	85	°C
TEC Drive Current		1.5	А
TEC Drive Voltage		3.6	V
Thermistor Resistance		10 kΩ @ 25 °C	
SLED Chip Temperature Setting		25 °C	
Fiber Type		SM800 or HI780	)
Fiber Jacket	250 µm tight	buffer with 900	µm loose tube
Package	14-	-pin DIL/8-Pin B	BUT

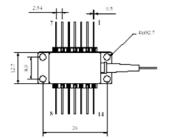
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## **Package Dimensions**







Dimensions in mm Tol: ±0.13

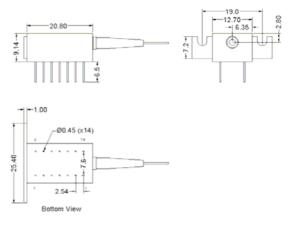
14-Pin BUT Package

#### Pin Definition

14-pin BUT package				14-pin DIL package				
Pin	Function	Pin	Function	Pin	Function	Pin	Function	
1	TEC(+)	8	NC	1	TEC(+)	8	NC	
2	Thermistor	9	NC	2	NC	9	SLD (-)	
3	NC	10	SLD (+)	3	NC	10	Case	
4	NC	11	SLD (-)	4	NC	11	Thermistor	
5	Thermistor	12	NC	5	SLD (+)	12	Thermistor	
6	NC	13	Case	6	NC	13	NC	
7	NC	14	TEC(-)	7	NC	14	TEC(-)	

• If the SLD is ordered with a Back Facet Monitor, Pin 7 is PD-Cathode and Pin 8 is PD-Anode

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14-Pin DIL Package



## Part Numbering System

PSDD0801: 820nm FOS-type SLED Device PSDD0802: 820nm OCT-type SLED Device PSDD0803: 820nm OCT-type SLED Device Package- 1: 14-pin DIL 2: 8-pin Butterfly 3: 14-pin Butterfly 3: 14-pin Butterfly 5: 14-pin Butterfl		IPSDD0801
1: 14-pin DIL 2: 8-pin Butterfly 3: 14-pin Butterfly 5: 14-pin Butte	IPSDD0802: 820nm	n OCT-type SLED Device
<ul> <li>SM Fiber</li> <li>PM Fiber</li> <li>Jacket Type:</li> <li>900 μm</li> <li>2- 250 μm tight buffer</li> <li>Connector Type:</li> <li>D=No Connectors 5=N/A</li> <li>D=N/A 6=N/A</li> <li>D=N/a 7=SC/APC</li> <li>B=FC/APC 8=SC/UPC</li> <li>J=FC/UPC 9=N/A</li> <li>Back Facet Monitor:</li> </ul>	<b>Package-</b> 1: 14-pin DIL 2: 8-pin Butterfly 3: 14-pin Butterfly	
2- $250 \ \mu\text{m}$ tight buffer Connector Type: D=No Connectors $5=N/A$ D=N/A $6=N/A$ D=N/A $6=N/A$ D=N/a $7=SC/APC$ D=FC/APC $8=SC/UPC$ D=FC/UPC $9=N/A$ Back Facet Monitor:	<b>Fiber Type:</b> 1- SM Fiber 2- PM Fiber	
$D=No \text{ Connectors } 5=N/A$ $I=N/A \qquad 6=N/A$ $D=N/a \qquad 7=SC/APC$ $B=FC/APC \qquad 8=SC/UPC$ $H=FC/UPC \qquad 9=N/A$ Back Facet Monitor:	<b>Jacket Type:</b> 1- 900 μm 2- 250 μm tight buff	fer
I=N/A       6=N/A         Q=N/a       7=SC/APC         B=FC/APC       8=SC/UPC         I=FC/UPC       9=N/A         Back Facet Monitor:       5	Connector Type:	
2=N/a7=SC/APC3=FC/APC8=SC/UPC4=FC/UPC9=N/ABack Facet Monitor:	0=No Connectors	5=N/A
B=FC/APC 8=SC/UPC H=FC/UPC 9=N/A Back Facet Monitor:	1=N/A	
H=FC/UPC 9=N/A Back Facet Monitor:	2=N/a	
Back Facet Monitor:	3=FC/APC	
1 I		

**Example**: IPSDD0801-1224: 820 nm FOS-type SLED in 14-pin DIL with 250 µm tight buffered PM fiber with FC/UPC connectors

#### **Corporate Office**

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