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Broadband SLD Light Source Module

Part Number: IPSDW1521-xxxx

1. Configuration

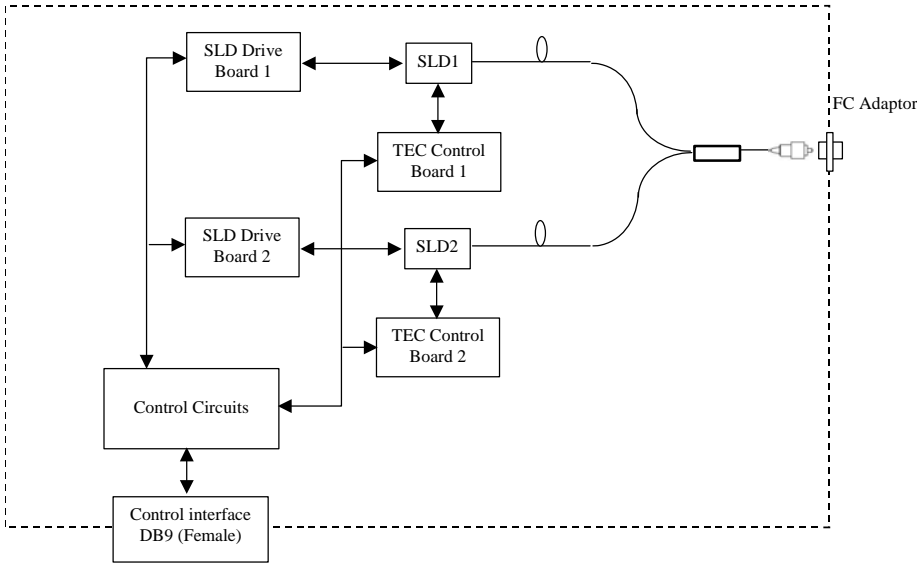


Figure 1 Configuration of IPSDW1521-xxxx SLD light source module

2. Absolute Maximum Ratings

Parameter	Min.	Max.	Unit
Power Supply Voltage	4.5	5.5	V
Storage Temperature	-40	+85	°C
Humidity	10	95	%

3. Recommended Operational Condition

Parameter	Min.	Typ.	Max.	Unit
Power Supply Voltage	4.75	5.00	5.25	V
Ripple/spike noise of Power Supply Voltage	-	50	120	mVp-p
Operating Temperature (case)	15	25	50	°C
Operating Humidity (case)	30	60	90	%

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4. Optical characteristics

Items	Specifications			Unit	Notes
	Min.	Typ.	Max.		
Center Wavelength	1540	1550	1560	nm	@25°C and CW. Connectors are included.
Power Density at Spectral Peak	-18.0	-	-	dBm/ 0.1nm	
3 dB Optical Bandwidth	100	-	-	nm	
ASE Ripple @ 0.1nm	-	-	1.0	dB	
Spectrum Flatness	-	-	2.0	dB	
Optical Power Stability (8hr)	-	-	±0.1	dB	Stability test of Pmax after 0.5 hour warm up at 25°C.
Optical Output Type	Fiber pigtail or FC Adaptor			-	As shown in Figure 2 of Section 7 in detail
Fiber Connector	FC/APC			-	
Fiber Type	Corning SM28 or equivalent			-	
Fiber jacker	900um loose tube			-	
Fiber Length	50	-	-	cm	If pigtail fiber out is selected.

5. Electrical characteristics

Item	Specifications			Unit	Notes
	Min.	Typ.	Max.		
Power supply current	-	1.2	2.5	A	Pmax CW optical output
Power consumption	-	6.0	13.0	W	
Range of Vset1 and Vset2	0.0	-	2.5	V	
Input impedance for Vset1,2	>20k			ohm	
VH for TTL input/output	3.80	-	-	V	For SLD Enable and Alarm
VL for TTL input/output	-	-	1.02	V	
Optical Power Control	SLD Current Adjustment via Vset1 and Vset2 as shown in Section 6			-	
Connector Type	DB9 Connector, Female			-	See section 6-Pin Allocation in detail



6. Pin Assignment Specifications

DB9 Connector (Female) Pin Allocation

Pin #	Function	In/Out	Type	Description
1	+5VDC	IN	Analog (5.0V)	Power Supply, $\leq 2.5A$.
2				
3	SLD Enable	IN	TTL	SLD turn on control. TTL high turns on SLD and TTL low turns off the SLD. See Figure 3 in detail.
4	Alarm	OUT	TTL	TEC operation status. TTL high indicates TEC failure and TTL low indicates TEC operation is in normal. See Figure 3 in detail.
5	V_{SET1}	IN	Analog (0~2.5V)	Input voltage to set SLD1 current. The range of 0.0-2.5V for V_{SET1} corresponds to $0 \sim I_{1max}$ mA of SLD1 operation current.
6	GND	IN	GND	Power supply and signals GND.
7				
8	V_{SET2}	IN	Analog (0~2.5V)	Input voltage to set SLD2 current. The range of 0.0-2.5V for V_{SET2} corresponds to $0 \sim I_{2max}$ mA of SLD2 operation current.
9	NC	NA	NA	Reserved

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7. Mechanical Specifications

2. Drawing and dimensions (unit: mm)

Size: 120mm (L) × 70mm (W) × 36mm (H)

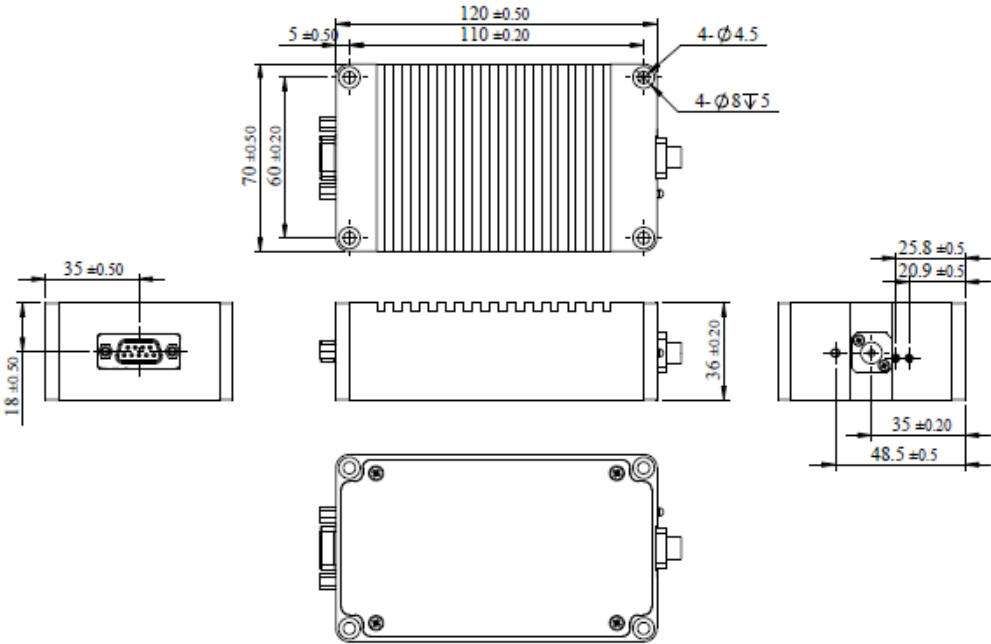


Figure 2 Mechanical drawing of IPSDW1521-0314 module

2. Module case is isolated from any electrical connection.

8. Signals Characteristics

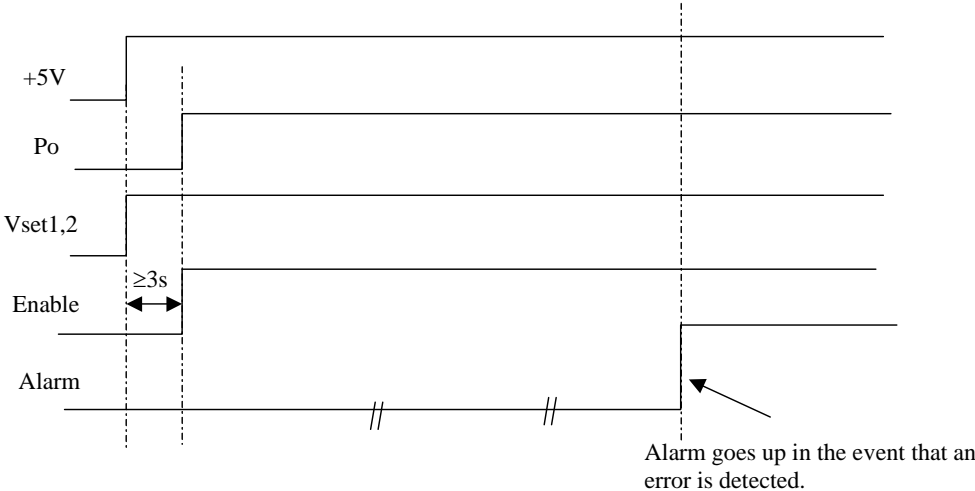
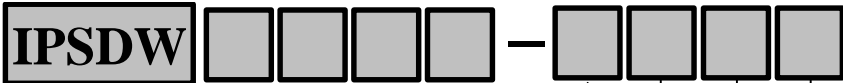


Figure 3 Startup and working timing of IPSDW1521 module

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9. Part Numbering Structure



Model Number _____
 07xx: 700~790nm SLD
 08xx: 800~890nm SLD
 09xx: 900~990nm SLD
 10xx: 1010~1090nm SLD
 13xx: 1300~1390nm SLD
 15xx: 1500~1590nm SLD

Output Type _____
 0: FC Adaptor
 1: Pigtail fiber

Connector Type _____
 0: No Connectors
 3: FC/APC 4: FC/UPC
 7: SC/APC 8: SC/UPC

Fiber Type _____
 1: 900 μm SM Fiber
 2: 900 μm PM Fiber

Case Size _____
 4: 120×70×36mm case
 5: 120×100×36mm case

Example: IPSDW1521-0314: 1550nm-type SLD module in 70×120×36mm case with FC adaptor output, FC/APC connector and 900 μm SM Fiber.

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