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SLD Light Source Module

Model Number: IPSDS1003C(Draft)
Document Number: IPxxxxx Rev1.0
Updated: 04-16-2010

1. Configuration

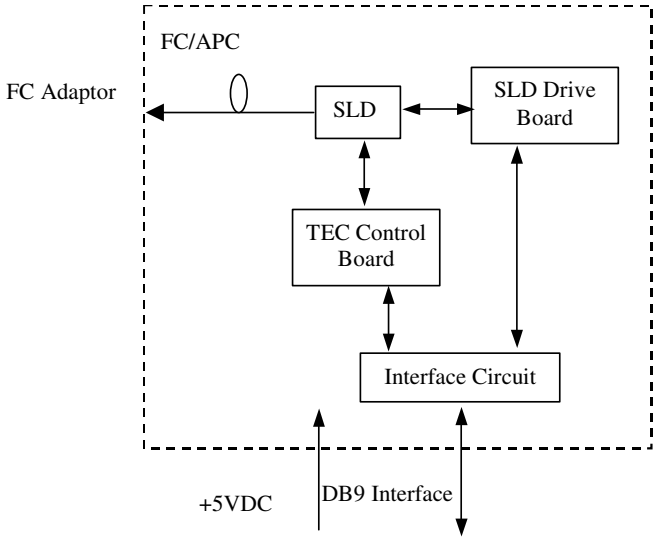

Figure 1 Configuration of module

2. Absolute Maximum Ratings

Parameter	Min.	Max.	Unit
Power Supply Voltage	4.5	5.5	V
Power Supply Current (Case Temp 10-40°C)	-	2	A
Power Consumption (Case Temp 65°C)	-	10	W
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)	10	25	75	°C
Operating Humidity (case)	30	60	90	%

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4. Optical characteristics

Items	Specifications			Unit	Notes
	Min.	Typ.	Max.		
Center Wavelength	1020	-	1050	nm	@25°C and CW optical output. Connectors included
3 dB Optical Bandwidth	100	-	-	nm	
Optical Power	5	10	-	mW	
ASE Ripple @ 0.1nm	-	2.3	4	%	
		0.1	0.18	dB	
Degree of Polarization	10	-	-		Slow/Fast Axis Polarization Ratio
Optical Power Stability (8hr)	-	-	±0.1	dB	Power on start-up current normally <1.0A when operation at 25ºC.
Optical Power Stability (1hr)	-	-	± 0.05	dB	Stability test after 1 hour warm up at 25ºC.
Optical Output Type	FC Adaptor or Pigtail			-	
Fiber Connector	FC/APC			-	
Fiber Type	HI980 or equivalent			-	

5. Electrical characteristics

Item	Specifications			Units	Notes
	Min.	Typ.	Max.		
Power supply current	-	1.2	2.0	A	Case temperature at 75°C, Pmax, CW optical output
Power consumption	-	4.0	10.0	W	
Operation Current	-	350	500	mA	@25°C and CW optical output
Range of Vset	0.0	-	2.5	V	
Range of Vread	0.0	-	2.5	V	
VH for TTL input/output	3.80	-	-	V	For SLD Enable and Alarm
VL for TTL input/output	-	-	1.02	V	
Input impedance for Vset	>20k			ohm	
Output impedance for Vread	100			ohm	
Output impedance for V_{PD}	100			ohm	
Connector Type	DB9 Connector, Female			-	See section 4-Pin Allocation in detail

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6. Pin Out Specifications

DB9 Connector Pin Allocation

Pin #	Function	In/Out	Type	Description
1	**+5VDC**	IN	Analog (5.0V)	Power Supply, ≤2A.
2	**NC**	NA	NA	Reserved
3	**SLD Enable**	IN	TTL	SLD turn on control. TTL high to turn on SLD and TTL low to turn off the SLD. See Figure 3 in detail.
4	**Alarm**	OUT	TTL	TEC working status. TTL high indicates that TEC failure actives and TTL high indicates that TEC operates in normal. See Figure 3 in detail.
5	$\mathbf{V_{SET}}$	IN	Analog (0~2.5V)	Input voltage to set SLD output power. The range of 0.0-2.50 V for $\mathbf{V_{SET}}$ responses to 0~100% Optical output power.
6	**GND**	IN	GND	Power supply and signals GND.
7	$\mathbf{V_{READ}}$	OUT	Analog (0~2.5V)	Output voltage to monitor SLD drive current. 0~2.5V linear with SLD drive current.
8	**NC**	NA	NA	Reserved
9	**NC**	NA	NA	Reserved

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7. Mechanical Specifications

1. Drawing and dimensions (unit: mm)

   Size: 100mm(L)×80mm(W)×26mm(H)

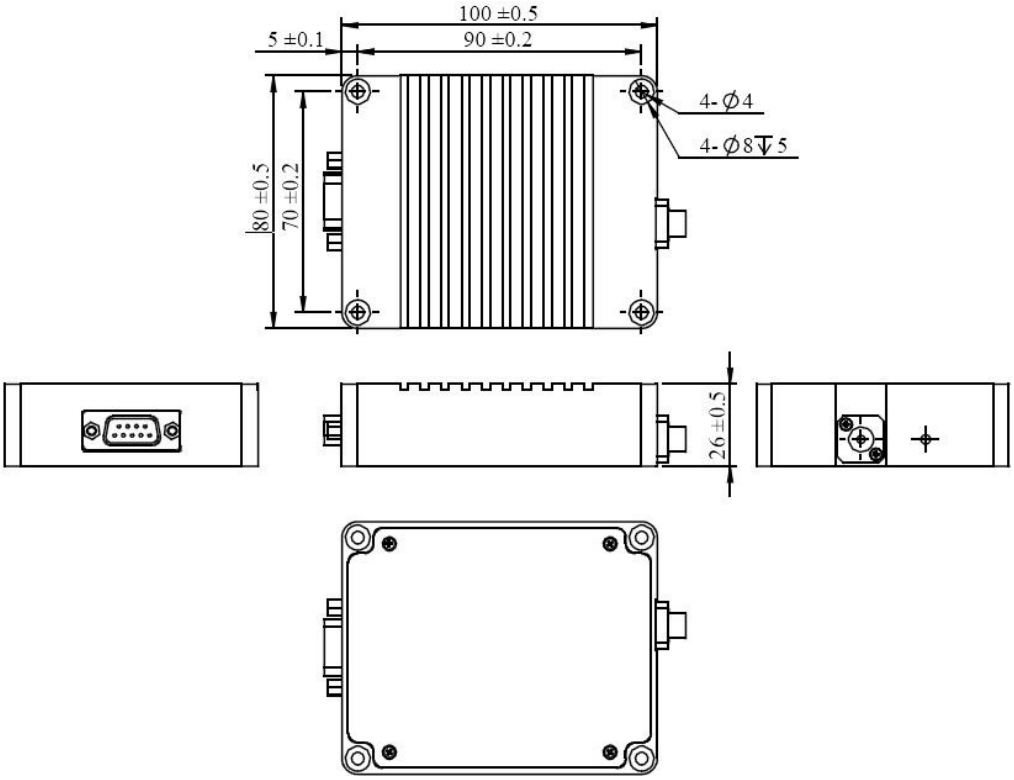

Figure 2 Mechanical drawing of module box

2. Module case is isolated from any electrical connection.

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8. Signals Characteristics

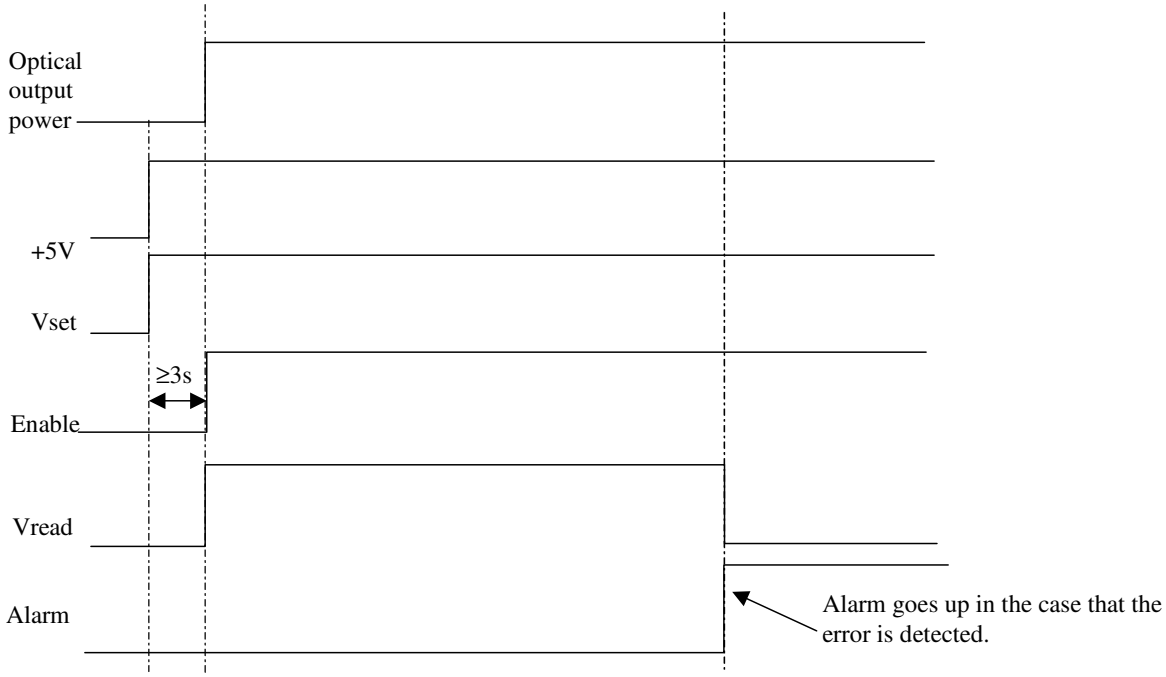

Figure 3 Startup and working timing of the module

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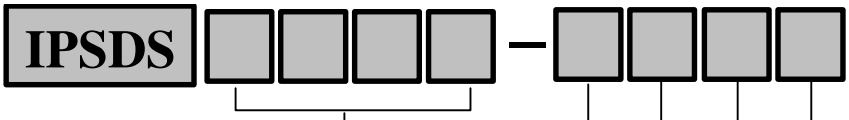
9. Part Numbering Structure



Model Number
07××: 700~790nm SLD
08××: 800~890nm SLD
09××: 900~990nm SLD
10××: 1010~1090nm SLD
13××: 1300~1390nm SLD
15××: 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
1- 80×100×26mm case
2- 100×130×26mm case
4- 70×120×40mm case
5- 160×140×40mm case

Example: IPSDS0801-0311: 800nm-type SLD module in 80×100×26mm case with FC adaptor, FC/APC connector and 900 μm SM Fiber.