



## C13D-5A-C25G

### 25Gb/s 1310nm DFB Laser Diode TO-can with Aspherical Lens

#### Description

The Lasermate C13D-5A-C25G is a high speed, 1310nm wavelength, DFB laser diode, TO-can, that can support from DC up to 25Gbps data rate operation and designed for use in telecommunication applications.



#### Features

- 1310nm DFB laser diode
- Low threshold current and low operation current
- -40 to 85°C operating temperature
- Packaged in industry aspherical lens TO-56 type
- Isolation pinout

#### Applications

- Support from DC to 25.78 Gbps data operation

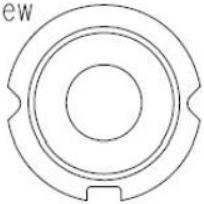
#### Specifications

Absolute Maximum Ratings				
Parameters	Symbol	Value	Unit	Conditions
Storage temperature	Tstg	-40~+90	°C	
Operating case temperature	Top	-40~+85	°C	
Lead solder temperature	Stemp	260	°C	10 seconds
Forward current (LD)	I <sub>FLD</sub>	100	mA	
Reverse voltage (LD)	V <sub>RLD</sub>	2	V	
Forward current (PD)	I <sub>RPD</sub>	2	mA	
Reverse voltage (PD)	V <sub>RPD</sub>	20	V	

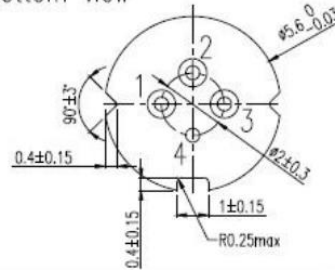
Electro-Optical Characteristics (CW @ T <sub>c</sub> = 25°C unless otherwise noted)						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Threshold current	I <sub>th</sub>		6	10	mA	CW
			18	25	mA	CW, T <sub>c</sub> =85°C
Forward voltage	V <sub>f</sub>		1.4	2.0	V	CW, I <sub>F</sub> =I <sub>th</sub> +30mA
Slope efficiency	η		0.25		mW/mA	CW, I <sub>F</sub> =I <sub>th</sub> +30mA
Peak wavelength	λ <sub>p</sub>	1300	1310	1320	nm	CW, T <sub>c</sub> =-40~85°C
Side-mode suppression rate	SMSR	35			dB	CW, I <sub>F</sub> =I <sub>th</sub> +30mA
Focal Length	FL	9.8	10.1	10.4	mm	CW, I <sub>F</sub> =I <sub>th</sub> +30mA, SMF
PD Monitor current	I <sub>m</sub>	50		1000	uA	CW, I <sub>F</sub> =I <sub>th</sub> +30mA, V <sub>R</sub> =1V
PD dark current	I <sub>d</sub>			0.1	uA	V <sub>R</sub> =5V
PD capacitance	C <sub>PD</sub>		4.5	5.5	pF	V <sub>R</sub> =5V@1MHz

### Outline Dimensions (unit: mm)

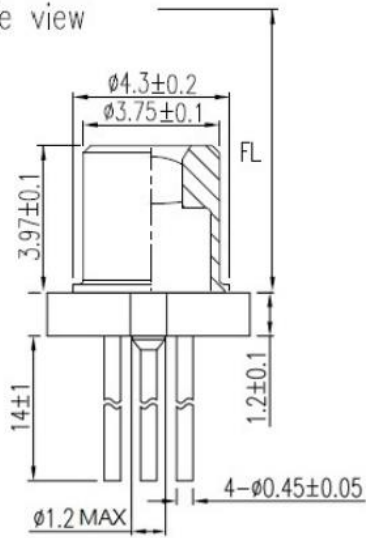
Top view



Bottom view



Side view



### Pin Configuration

Pin Number	Function
1	LD Cathode
2	PD Cathode
3	LD Anode
4	PD Anode

### Additional Notes

- Avoid eye or skin exposure to laser radiations.
- The device is sensitive to electro-static discharge (ESD). The device should be handled with ESD proof tools. To assemble the device on PCB, proper grounding is required to prevent ESD.
- Specifications are subject to change without notice.