1064 nm laser diode

700 mW / singlemode fiber / Butterfly package

Reference: 1064LD-1-0-0 Technology : Single mode Fabry Perot*

SPECIFICATIONS	Unit	Min	Typ	Maximum
Output Power (kink free)	mW	700		
Center Wavelength (Chip regulated at >~30°C)	nm	1063	1064	1065
Spectral Width	nm(FWHM)		2.5	
Threshold Current	mA			70
Operating Current	mA		1200	1500
Operation Voltage	V		1.7	2.0
Wavelength shift w Temperature	nm/°C		0.35	
Polarization Extinction Ratio	dB	13		
Internal Photodiode Responsivity	mA/W	0.5		10
Internal Photodiode Dark Current	nA			100
TEC current (Case @ 75°C)	A			1.4
TEC Voltage (Case at 75°C)	V			3.2
Internal thermistor (25°C)	kOhm	9.5		10.5
Fiber type	PM fiber : SM98-PS-U25D-H or Nufern PM980			
Fiber bend radius	mm	16 (abs min)		
Coating diameter	µm	230	250	270
Storage case temperature	°C	-40 (abs min)		85 (abs max)
Operating case temperature	°C	-20 (abs min)		75 (abs max)
Lead soldering temperature	°C			280
Laser diode reverse voltage	V			2.0
Pigtail Termination	Ferrule			
Polarization state	Aligned to the slow axis			

*: See our tutorial : fiber coupled laser diode

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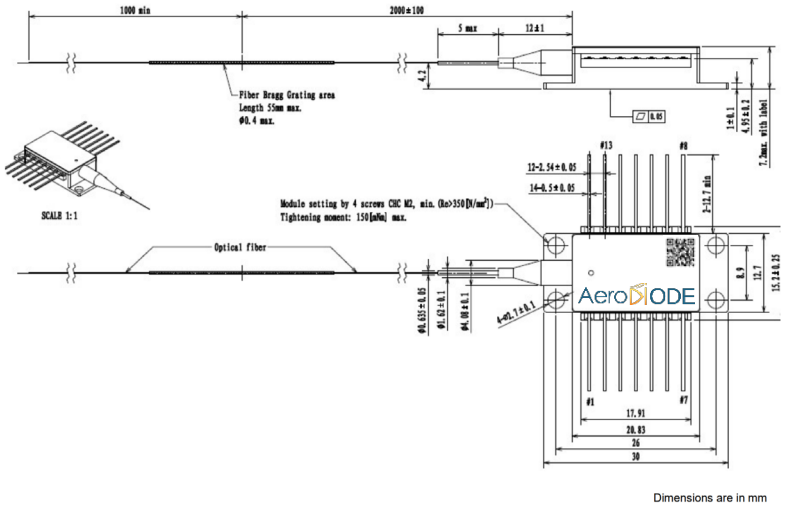
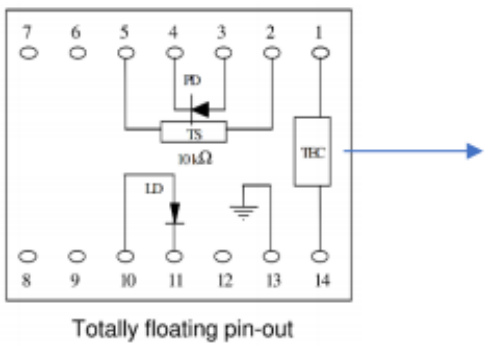


Dimensions are in mm

Laser diode pinning :



Totally floating pin-out

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Product web page : 1064 nm laser diode

1064 nm laser diode - DFB

>200 mW / singlemode fiber / 10 pin Butterfly package*

Reference: 1064LD-2-0-0 Technology : DFB**

SPECIFICATIONS	Unit	Min	Typ	Maximum
Output Power (CW mode)	mW	200	220	
Output Power (Pulse mode)	mW	500	700	850
Center Wavelength (CW)	nm	1063.0	1064.0	1065.0
Center Wavelength (Pulse)	nm	1062.5	1063.3	1064.5
Spectral Width (FWHM)	kHz		200	
Threshold Current	mA		30	70
Operating Current	mA		350	400
Operation Voltage	V		2.0	2.5
Wavelength shift w Temperature	nm/°C		0.06	
Wavelength shift w Current	nm/mA		0.0025	
Polarization Extinction Ratio	dB	13		
Internal Photodiode Responsivity	mA/W	0.5		10
Internal Photodiode Dark Current	nA			100
TEC current (Case @ 75°C)	A			1.4
TEC Voltage (Case at 75°C)	V			3.2
Internal thermistor (25°C)	kOhm	9.5		10.5
Fiber type	PM fiber : SM98-PS-U25D-H or Nufern PM980-HP			
Fiber bend radius	mm	20 (abs min)		
Coating diameter	µm	230	250	270
Storage case temperature	°C	-40 (abs min)		85 (abs max)
Lead soldering temperature	°C			350
Laser diode reverse voltage	V			2.0
Pigtail termination	Bare fiber			
Polarization state	Aligned to the slow axis			

*: 10 pin Butterfly packages are compatible with all AeroDIODE Drivers (The pinning is very similar to a Type-1 Butterfly laser diode pinning)

**: See our tutorial : fiber coupled laser diode

Revision 1.1 – fev 2021

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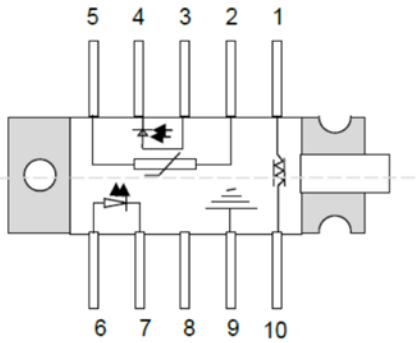

Laser diode pinning :

Pin	Description	Pin	Description
1	TEC (+)	6	Laser anode (+)
2	Thermistor	7	Laser cathode (-)
3	Monitor anode (-)	8	NC
4	Monitor cathode (+)	9	Package ground
5	Thermistor	10	TEC (-)

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Product web page : 1064 nm laser diode

1064 nm laser diode – Broad Bragg

>650 mW / singlemode fiber / 10 pin Butterfly package*

Reference: 1064LD-3-0-0

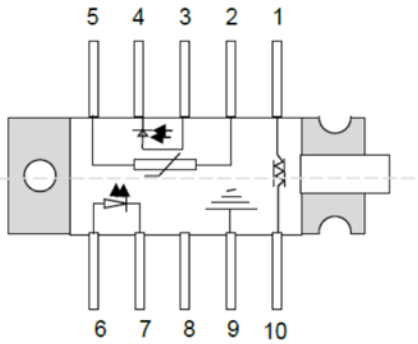
Technology : Fabry Perrot with broad FBG**

SPECIFICATIONS	Unit	Min	Typ	Maximum
Output Power (nominal/kink free)	mW	500/600	650/720	
Output Power (Pulse mode)	mW	1400	2000	
Center Wavelength (CW/Pulsed)	nm	1062.0	1064.0	1066.0
Spectral Width (FWHM)	nm		2	4
Threshold Current	mA		30	70
Operating Current	mA		350	400
Operation Voltage	V		2.0	4.0
Polarization Extinction Ratio	dB	13		
Internal Photodiode Responsivity	mA/W	0.5		40
Internal Photodiode Dark Current	nA			50
TEC current (Case @ 75°C)	A			1.5
TEC Voltage (Case @ 75°C)	V			3.0
Internal thermistor (25°C)	kOhm	9	10	11
Fiber type	PM fiber : SM98-PS-U25D-H or Nufern PM980-HP			
Fiber bend radius	mm	20 (abs min)		
Coating diameter	µm	230	250	270
Storage case temperature	°C	-40 (abs min)		85 (abs max)
Lead soldering temperature	°C			350
Laser diode reverse voltage	V			2.0
Fiber termination	Bare fiber – Optional FC/APC connector			
Polarization state	Aligned to the slow axis			

*: 10 pin Butterfly packages are compatible with all AeroDIODE Drivers (The pinning is very similar to a Type-1 Butterfly laser diode pinning)

**: See our tutorial on fiber coupled laser diode

Form factor:



Laser diode pinning :

Pin	Description	Pin	Description
1	TEC (+)	6	Laser anode (+)
2	Thermistor	7	Laser cathode (-)
3	Monitor anode (-)	8	NC
4	Monitor cathode (+)	9	Package ground
5	Thermistor	10	TEC (-)

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1064 nm laser diode

9 W- 105 µm core fiber – 0.22 NA

Reference: 1064LD-4-0-0 Technology : Single emitter Multimode

SPECIFICATIONS	Unit	Min	Typ	Maximum
Output Power	W	9		
Center Wavelength	nm	1059		1069
Spectral Width (FWHM)	nm		3.5	7
Threshold Current	A		0.5	0.9
Operating Current	A		11.7	12.0
Operation Voltage	V		1.75	2.2
Wavelength shift w Temperature	nm/°C		0.3	
Wavelength shift w current	nm/A		1.0	
Slope Efficiency	W/A		0.85	
Fiber Buffer/tube Diameter	µm		900/250	
Fiber Clad Diameter	µm		125	
Fiber Core Diameter	µm		105	
Numerical Aperture	NA		0.22	
Storage case temperature	°C	-30		70
Operating case temperature	°C	15		55
Soldering Temperature	°C			260
Soldering time	s			10
Fiber connector	Yes (SMA905)			
Fiber bend radius	mm	37.5		
Please solder the pins when the level of current is over 6A				

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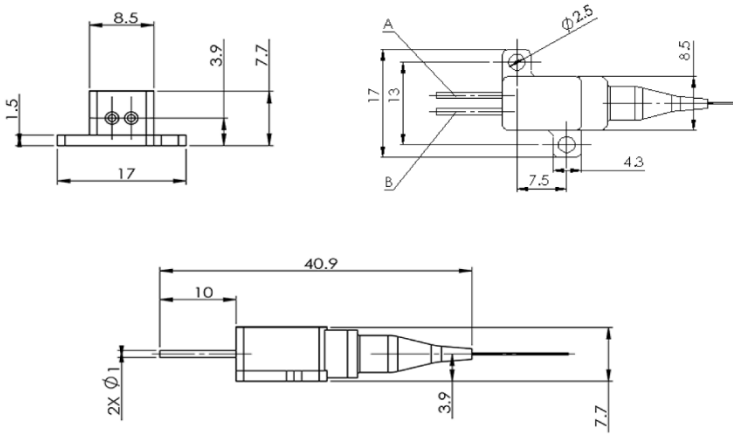

PIN OUT:

PIN	Description
A	LD+

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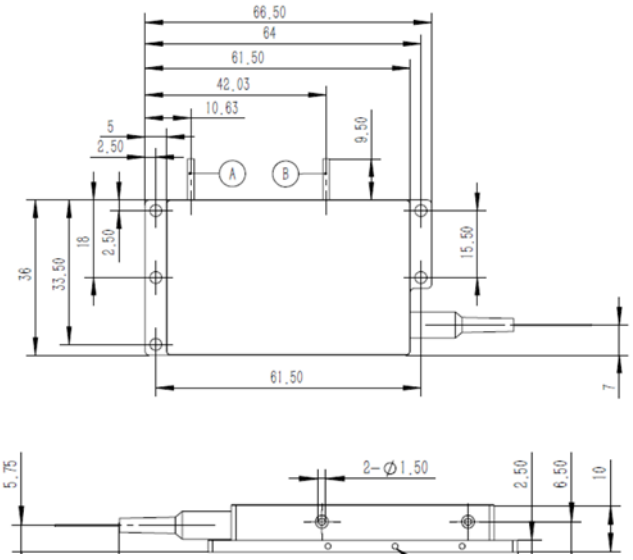
1064 nm laser diode

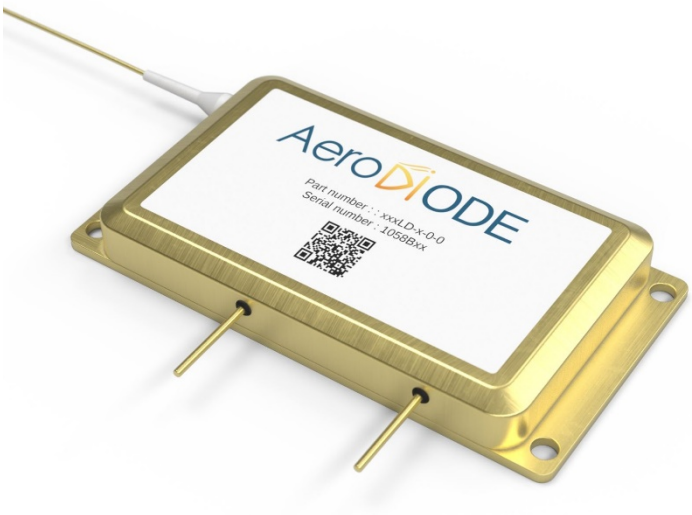
25 W- 105 µm core fiber – 0.22 NA

Reference: 1064LD-5-0-0 Technology : Multi-emitter Multimode

SPECIFICATIONS	Unit	Min	Typ	Maximum
Output Power	W	25		
Center Wavelength	nm	1058		1070
Spectral Width (FWHM)	nm		4.5	7
Threshold Current	A		0.5	0.9
Operating Current	A		10.0	12.0
Operation Voltage	V		5.0	7.0
Wavelength shift w Temperature	nm/°C		0.3	
Wavelength shift w current	nm/A		1.0	
Slope Efficiency	W/A		2.6	
Fiber Buffer/tube Diameter	µm		900/250	
Fiber Clad Diameter	µm		125	
Fiber Core Diameter	µm		105	
Numerical Aperture	NA		0.22	
Storage case temperature	°C	-30		70
Operating case temperature	°C	15		55
Soldering Temperature	°C			260
Soldering time	s			10
Fiber connector	Yes (SMA905)			
Fiber bend radius	mm	37.5		
Please solder the pins when the level of current is over 6A				

Form factor:





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