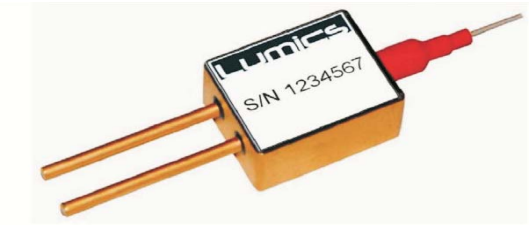





LU1470T015
Industrial Laser Diode
Up to 1.5W Operating Power



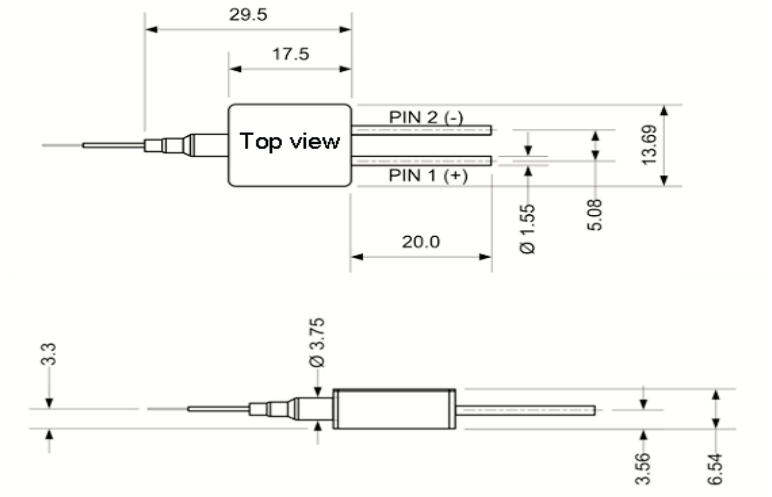
Description:
The LU1470T015 series offers an optical power of 1.5W at 1470nm from a 105µm core, NA 0.15 multi-mode fiber. At this common wavelength our Laser Diode offers a very competitive price-performance value for applications in materials processing, illumination and medicine.

Features & Functions:
- Burn-in tested single emitter
- Hermetically sealed
- 105µm MM Fiber, NA 0.15
- Wavelength 1470nm
- Floating anode / cathode
- Direct modulation up to 100 MHz

Benefits:
- Ultra long lifetime
- Cost-effective
- Robust
- RoHS complient

Applications:
- Materials processing
- Illumination
- Pumping
- Medical treatment

Modul Drawing (dimensions in mm)



Pin Connections

Pin	Function	Pin	Function
1	LD Anode (+)	2	LD Cathode (-)

Your ideas are welcome.

Electrical and Optical Characteristics
Typical laser specifications at 25°C

Parameter	Symbol	Typical	Unit
Output Power c.w.	$P_{op\ (c.w.)}$	1.5	W
Peak Wavelength at P_{op}	λ_{peak}	1470+/-20	nm
Spectral Width (fwhm)	$d\lambda$	11	nm
Threshold Current	I_{th}	850	mA
Operating Current	I_{op}	7.0	A
Operating Voltage	V_{op}	1.4	V
Connector Type (optional)		bare fiber (*SMA, FC/APC, FC/PC connector)	
Heat Resistance LD to bottom of base plate	R_H	3.5	K / W
Power Conversion Efficiency		20	%
Recommended Case Temperature		20 - 30	°C
Wavelength Shift vs. Temperature		0.4	nm / K
Wavelength Shift vs. Power		1.1	nm / W
Fiber Specifications			
Fiber Core Diameter		105	µm
Fiber Numerical Aperture	NA	0.15	
Fiber Cladding Diameter		125	µm
Fiber Buffer Diameter		250	µm
Min. Fiber Length		1	m
Min. Bend Radius		50	mm

Application Note:
(1) For pulsed operation max peak power can be 1.5xPop if pulse time is <5µsec and average power is lower than Pop (c.w.)
(2) Keep the heat sink at <= 30°
(3) We recommend a standard heatsink with thermal resistance of <0.5K/W using forced air flow cooling. Use thermal interface material rated for a thermal contact resistance of less than 1.3cm2K/W
(4) Please not, that the 1470nm diodes are highly sensitive to ESD. ESD precautions must be followed very carefully
(5) A bending radius of 30mm is guaranteed. Please take into account a possible output power reduction of up to 5% at this bending radius.

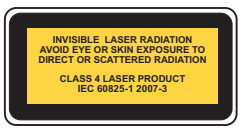
Absolute Maximum Ratings

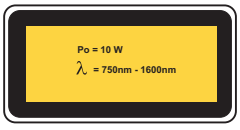
Parameter	Symbol	Min	Max	Unit
Storage Temperature	T_{max}	-40	85	°C
Operating Case Temp.	$T_{op,\ case\ temp.}$	15	40	°C
Maximum Processing Temp.-max 10sec.	$T_{op,\ Processing}$		250	°C
LD Forward Current c.w.	$I_{op,\ max}$		10	A
LD Reverse Voltage	$V_{R,\ max}$		2	V
Rel. Humidity		5	85	%

Note:
Absolute Maximum Ratings may be applied to the laser module for short periode of time only. Exposure to maximum ratings for extended period of time or exposure above one or more max ratings may cause damage or affect the reliability of the device

User Safety







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