

LC-ASE-C-10

OVERVIEW

LC-ASE-C-10 is a broadband fiber optical source of incoherent radiation based on amplified spontaneous emission.

MAIN FEATURES

- Wavelength: 1560 nm
- Bandwidth 29 nm at -10 dB
- Optical power: up to 10 mW in CW mode
- Package: plastic case 100x80x10.5 and pump laser diode (package B, T or E)

APPLICATIONS

- Laser Systems
- Optical Fiber Gyroscopes

ORDERING INFORMATION

LC-ASE-C-10-X-X-X-X

Pump laser case type _____

B: compact coaxial with double-sided bracket and radiator
T: 14 pins DIL with thermal stabilization (TEC and thermistor)
E: 14 pins DIL with thermal stabilization (TEC and thermistor)
It is necessary to provide heat removal from the case

Fiber type _____

SM1: G.657.A1, [Corning SMF-28 Ultra](#), furcation tubing Ø0.9 mm
Standard fiber length 50 cm

Connector type _____

FA: FC/APC
N: no connector

Certification _____

CW: CW mode

Version 20.2

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ABSOLUTE MAXIMUM RATINGS

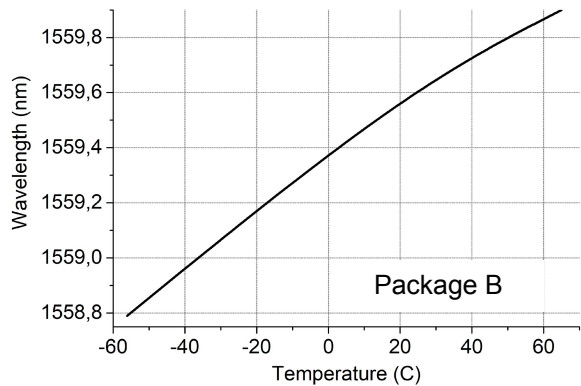
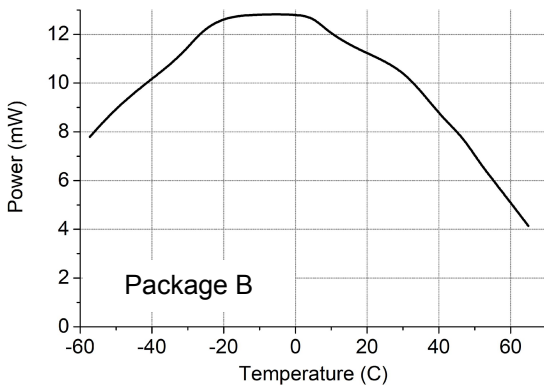
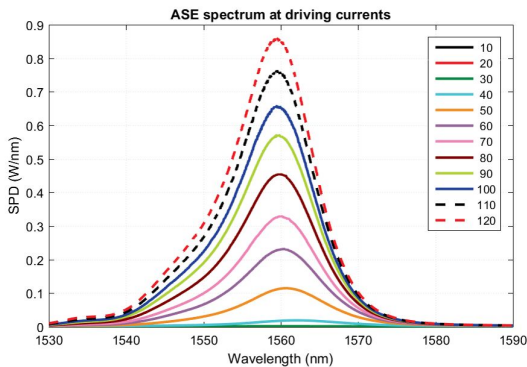
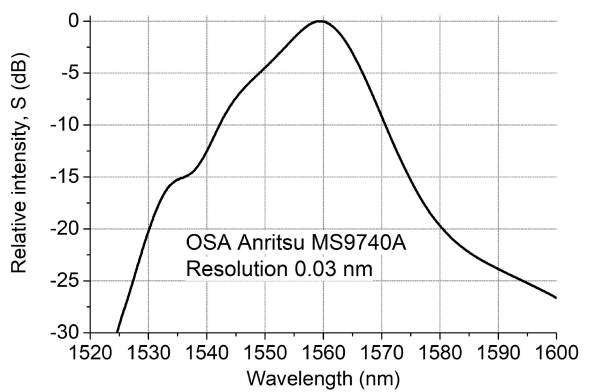
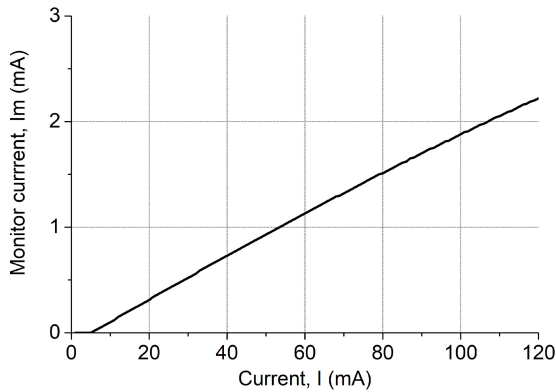
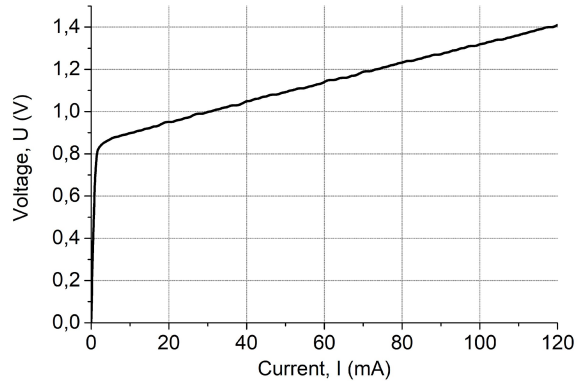
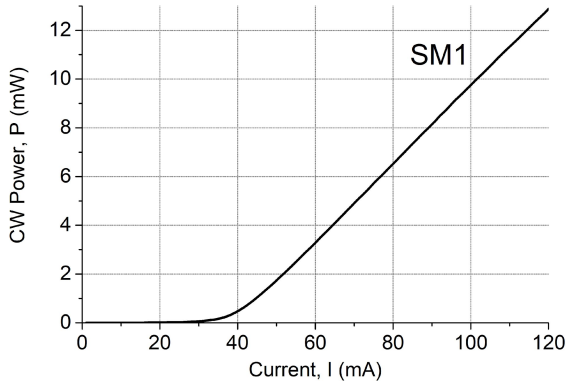
| Parameter | | Value | Unit | Conditions |
|------------------------------------|------------|-----------|------|----------------------------|
| Pump laser diode forward current | I_{FL} | 140 | mA | CW |
| Pump laser diode reverse voltage | V_{RL} | 2 | V | |
| Monitor photodiode reverse voltage | V_{RP} | 30 | V | |
| Operating temperature | T_{op} | -40 - +60 | °C | Package U, B, power < 3 mW |
| | | -40 - +50 | | Package T, E, BTF2 |
| Storage temperature | T_{stg} | -50 - +80 | °C | |
| Soldering temperature | T_{sold} | 260 | °C | Max. 10 seconds |

ELECTRICAL-OPTICAL CHARACTERISTICS (T = 25 °C)

| Parameter | | Min | Typ | Max | Unit | Conditions |
|--------------------------------|-----------------|------|------|-----|--------|-------------------------------|
| Wavelength | λ | | 1560 | | nm | CW, P = 10 mW |
| Spectral width | $\Delta\lambda$ | | 29 | | nm | CW, P = 10 mW, -10 dB |
| Wavelength-temperature coeff. | $d\lambda/dT$ | | 6 | | ppm/°C | |
| Spectral ripple | | | 0.3 | | % | CW, P = 10 mW |
| Threshold current | I_{th} | | 40 | | mA | CW |
| Operating current | I_{op} | | 105 | 120 | mA | CW, P = 10 mW |
| Operating voltage | V_{op} | | 1.4 | 1.6 | V | CW, P = 10 mW |
| Slope efficiency | S_e | 0.12 | 0.16 | | mW/mA | CW |
| Monitoring output current (PD) | I_m | 0.5 | | 3 | mA | CW, P = 10 mW, $V_{rd} = 5$ V |
| Mass | | | 75 | | g | Package E |

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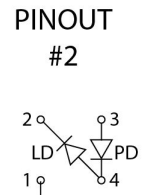
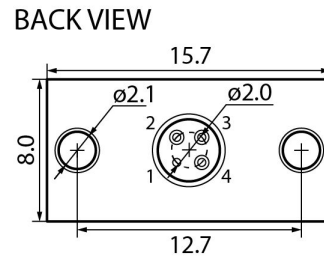
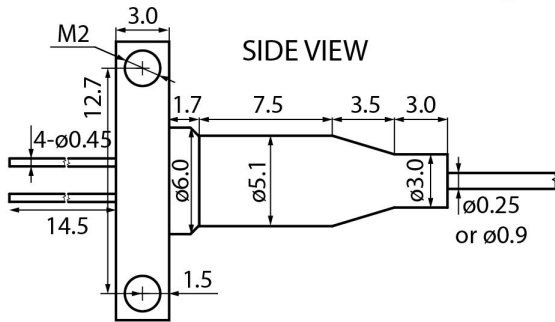
CHARACTERISTICS (T = 25 °C)



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PACKAGE TYPE AND ELECTRICAL CONNECTION

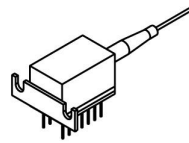
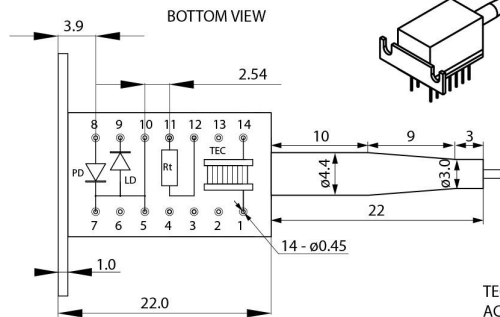
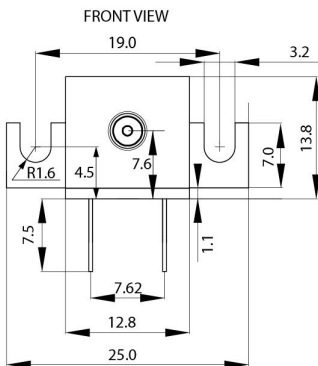
PACKAGE B



Connector FC/UPC, FC/APC, no connector, or by request

Fiber length 500+/-50, 1000+/-100, or by request

PACKAGE T



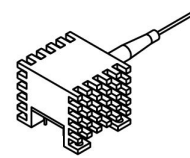
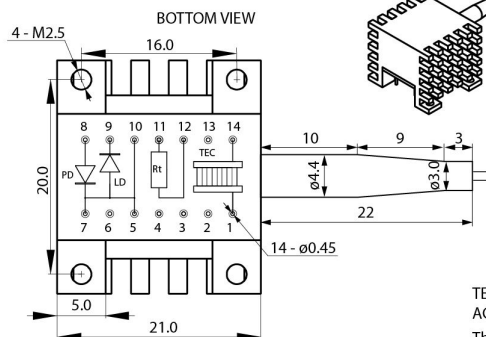
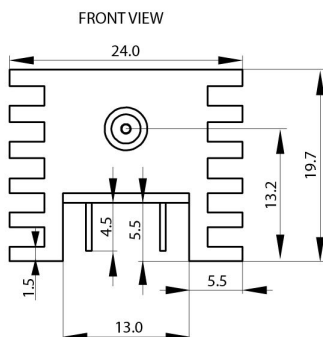
PINOUT #2, #3

- 1.TEC Anode
- 2.-
- 3.-
- 4.-
- 5.LD Anode
- 6.-
- 7.PD Cathode, LD Anode
- 8.PD Anode
- 9.LD Cathode
- 10.LD Anode
- 11.Thermistors
- 12.Thermistors
- 13.-
- 14.TEC Cathode

TEC: $I_{\max} = 0.7 \text{ A}$, $U_{\max} = 3.9 \text{ V}$, $Q_{\max} = 1.4 \text{ W}$,
AC $R = 4.7 \text{ Ohm}$, $\Delta T_{\max} = 72 \text{ K}$

Thermistor:
 $R_t = 10 \cdot \exp(3600 \cdot \{1/T[K] - 1/298\})$ kOhm

PACKAGE E



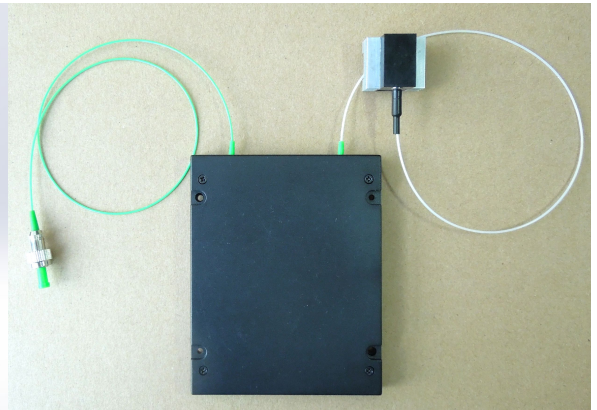
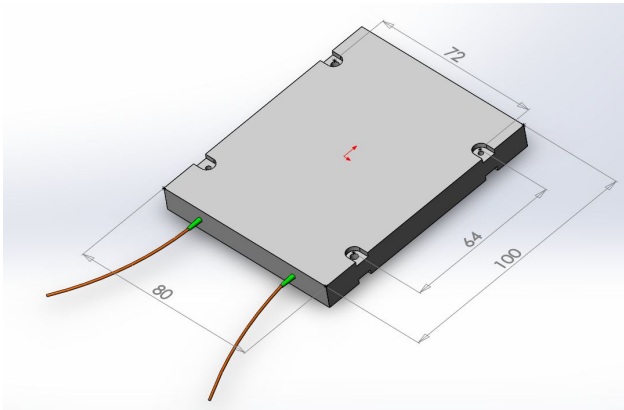
PINOUT #2, #3

- 1.TEC Anode
- 2.-
- 3.-
- 4.-
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- 6.-
- 7.PD Cathode, LD Anode
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Characteristics, data, materials and structures specified in this datasheet are subject to change without notice. Please refer to the latest specification before use of the products.

Safety and handling cautions

1. Laser light is very dangerous if shot directly into human eyes. Do not look directly into the output connector aperture or through optical components such as lenses, prisms, mirrors, microscope objectives etc. Wear protective goggles.
2. Avoid smashing and burning of the module. Avoid storing and using the module in conditions where water, organic solvents or aggressive acids or bases may contact the module or where there is a possibility of exposure to corrosive gases, explosive gases, dust, salinity or other harsh conditions. The module should be disposed as special industrial waste.
3. Exceeding absolute maximal ratings even for a short time can cause permanent damage of the module.
4. The module is sensitive to and can be broken by ESD (static electricity).

Conflict Minerals Policy Statement

LasersCom LLC achieves business objectives and customer needs with social responsibility. We do not support or contribute to the violence and human rights violations associated with the mining of conflict minerals coming from Conflict Regions according to US "Dodd-Frank Act". When possible, our suppliers' conflict mineral statements are reviewed. We do not directly purchase Conflict Minerals from any source and do not knowingly procure any parts and products containing Conflict Minerals from Conflict Regions.

RoHS Compliance Statement

Restriction of Hazardous Substances (RoHS) directive (Directive 2011/65/EC amended with Directive (EU) 2015/863) is the directive aimed at reducing the harmful environmental impact of waste electrical equipment by restricting the use of known dangerous substances. Based on information received from our supply sources, LasersCom LLC hereby states that the banned substances listed in the RoHS directive are not found in the parts and materials used above the threshold level listed other than exceptions approved by the European Commission.

REACH Compliance Statement

Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) is a European Union regulation 1907/2006/EC that addresses the production and use of chemical substances, and their potential impacts on human health and the environment. Based on information received from our supply sources, LasersCom LLC hereby states compliance of the parts and materials used in manufacturing to REACH regulation. LasersCom LLC does not manufacture or import any substances or preparations as defined under REACH.