

ELED-840-4

Preliminary

OVERVIEW

ELED-840-4 is the edge-emitting superluminescent diode (SLD) coupled to an optical fiber and packaged into a hermetic case

MAIN FEATURES

- Wavelength: 840 nm
- Optical power: 4 mW in CW mode in single-mode fiber Corning HI-780
- Large spectral width 40-50 nm
- Package types: compact coaxial with bracket
- Built-in monitor photodiode

APPLICATIONS

- Sensorics
- Optical fiber systems

ORDERING INFORMATION

ELED-840-4-X-28-X-X-X-X

Case type _____

U9:compact coaxial

B9:compact coaxial with double-sided bracket

Other type on request

Fiber type _____

SM05: SM, [Corning HI-780](#), furcation tubing Ø0.9 mm

SMP05: PM, [Fujikura SM85](#), furcation tubing Ø0.9 mm

SM1: SM, G.657.A1, [Corning SMF-28 Ultra](#), furcation tubing Ø0.9 mm or **BSM1** Ø0.25mm

SM3: SM, G.657.B3, [Corning ClearCurve ZBL](#), furcation tubing Ø0.9 mm or **BSM3** Ø0.25mm

MM5: MM, [50/125 OM2](#), furcation tubing Ø0.9 mm

MM6: MM, [62.5/125 OM1](#), furcation tubing Ø0.9 mm

Other type on request

Connector type _____

FU: FC/UPC (SM05, SMP05, SM1, SM3, MM5, MM6), not for free-space applications

FA: FC/APC (SM05, SMP05, SM1, SM3)

N: no connector

Other type: on request

Test measurements _____

CW: CW mode (electro-optical parameters at T=25+/-5 C and spectrum)

Fiber length _____

0.5: 500+/-50 mm

1.0: 1000+/-100 mm

Other length on request

Version 22.1

ELED-840-4

ABSOLUTE MAXIMUM RATINGS

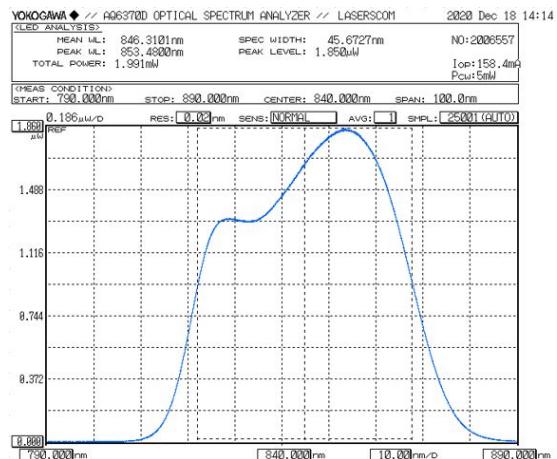
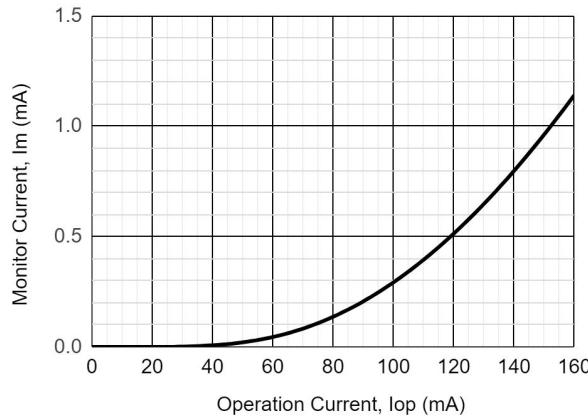
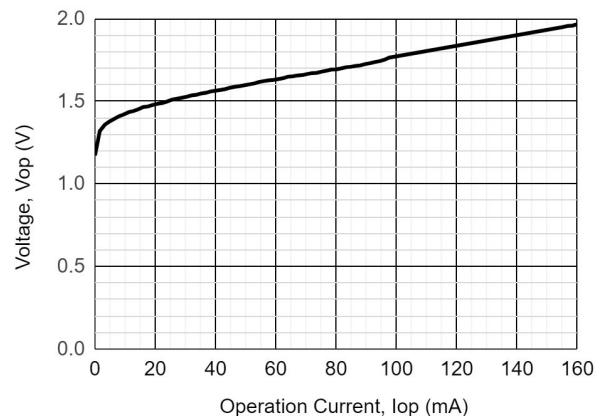
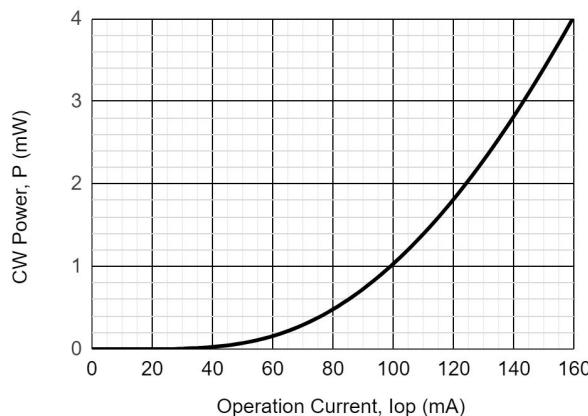
Parameter		Value	Unit	Conditions
Optical output power	P_0	4.5	mW	
SLD forward current	I_{FL}	185	mA	CW
SLD reverse voltage	V_{RL}	2	V	
SLD forward voltage	V_F	2	V	
Operating temperature	T_{OP}	-20 - +50	°C	Package B9
Storage temperature	T_{stg}	-40 - +85	°C	
Soldering temperature	T_{sold}	260	°C	Max. 10 seconds

ELECTRICAL-OPTICAL CHARACTERISTICS (T = 25 °C)

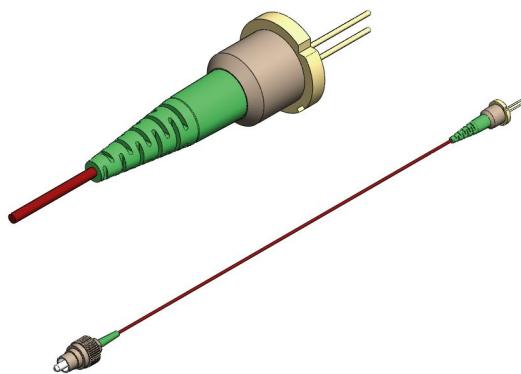
Parameter		MIN	TYP	MAX	Unit	Conditions
Wavelength	λ	810	840	870	nm	CW, P = 4 mW
Spectral width*	$\Delta\lambda$	35	45		nm	CW, P = 4 mW, FWHM
Spectral modulation			1	3	%	CW, P = 4 mW
Operating current	I_{op}		160	180	mA	CW, P = 4 mW, SM05
Operating voltage	V_{op}		2.0	2.6	V	CW, P = 4 mW
Monitor current	I_m	0.5	1.2	3.0	mA	CW, P = 4 mW, $V_r = 5V$
Polarization extinction ratio	PER	10			dB	CW, SMP05

*Maximum spectral width is achieved at specific combinations of operation current and temperature

ELED-840-4

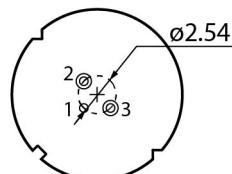


ELED-840-4

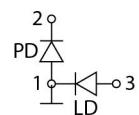


PACKAGE U9

BACK VIEW



PINOUT #28

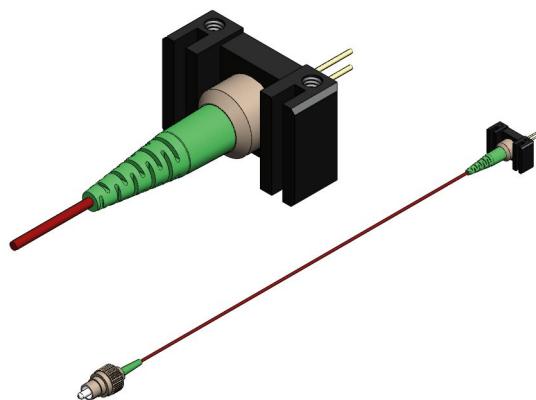


Download more
information

Drawing

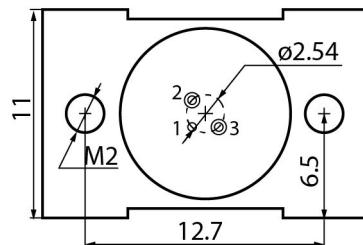
3D model

Application Notes

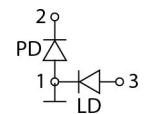


PACKAGE B9

BACK VIEW



PINOUT #28



Download more
information

Drawing

3D model

Application Notes

ELED-840-4

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. 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.
2. Exceeding absolute maximum ratings even for a short time can cause permanent damage of the module.
3. 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/EU 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.