1A850U3 OECA-SMA100 — 850 nm VCSEL

Description

The 1A850U3 OECA-SMA100 is a 850 nm VCSEL (Vertical Cavity Surface-Emitting Diode) in a FSMA-receptacle. The assembled device is electrical isolated from the FSMA-receptacle (maximum voltage 20V) to protect the diode against ESD-damaging.

Device can differ from picture.
For details and pin out please refer to the drawing.

Applications

- Fiber channel, Gigabit Ethernet, ATM
- General applications

Features

- Wavelength λ = 850 nm
- Laser class 3B

Absolute Maximum Ratings (T_C = 20°C)

Parameter	Symbol	min.	max.	Unit
Reverse Voltage	V_R		8	V
Electrical Power Dissipation	P_{tot}		100	mW
Continuous Forward Current	I_F		40	mA
Operating Temperature	$T_{OP} = T_C$	-30	+85	°C
Storage Temperature	T_{stg}	-40	+85	°C
Soldering Temperature / Soldering Time	T_{sold} / t_{sold}		290/5	°C/s

Optical and Electrical Characteristics (T_C = 20°C)

Parameter	Symbol	Condition	min.	typ.	max.	Unit
Fiber Coupled Power	P_{fiber}	Fiber 100/140µm NA = 0.29 ; GI I_F= 30mA	2.5	6		mW
Threshold Current	I_{th}				7	mA
Wavelength	λ	I_F = 30mA	835	850	860	nm
Spectral Bandwidth (FWHM)	Δλ	I_F = 30mA			1	nm
Laser Voltage	V_{op}	I_F = 30mA	1.6	2.0	2.3	V
Rise and Fall Time	t_r/t_f	$P_{off/on}$=0.2/2.5mW		90	150	ps
Bandwidth 3 dBel	f_C	I_F = 30mA	3			GHz

Thermal Characteristics

Parameter	Symbol	min.	typ.	max.	Unit
Thermal Resistance - Infinite Heatsink	R_{thcc}			1	K/mW
Temperature Coefficient - Wavelength	$d\lambda/dT_j$		0.07		nm/K
Slope Efficiency - Variation 0 to 70°C	Δ ηs		0.1		W/A

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DIN EN ISO 9001 : 2008
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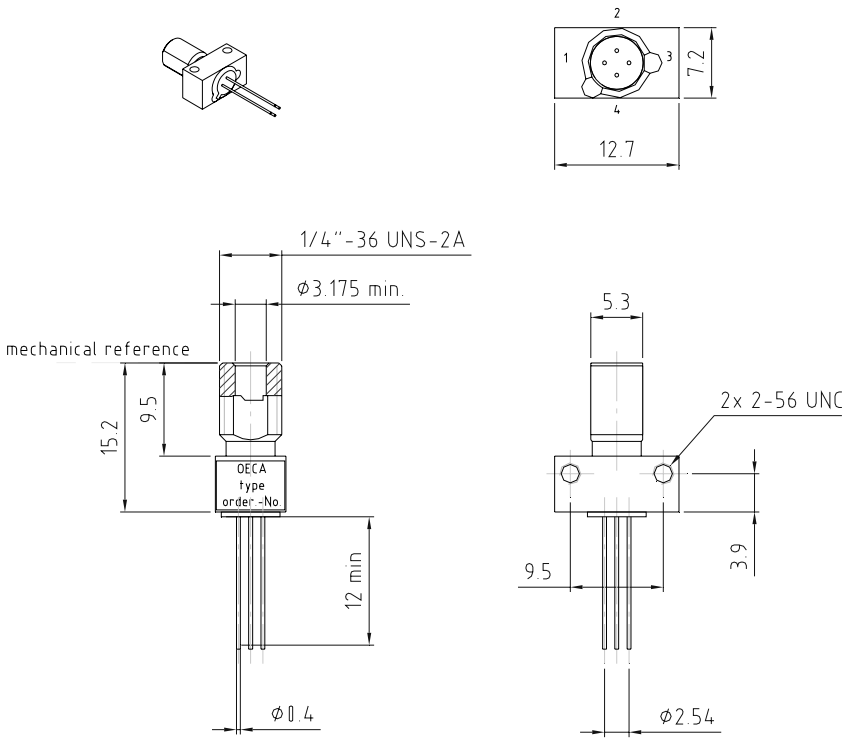
Drawing



Pinout acc. to specification
tolerances acc. to DIN ISO 2768mH

all dimensions in mm

Accessories: dust cover
nut 1/4"-362UNS
washer 1/4"
2x screw 2-56UNC

Pin-Out

Pin	VCSEL 1A850U3
1	VCSEL Cathode
2	reserved, not to use
3	VCSEL Anode
4	Case

Chip is isolated from the case.

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