

Thermal stabilized laser modules Dual-In-Line-(DIL) and Butterfly-packages

Thermal stabilized laser modules are used in applications where stable operation conditions are required. Working at constant operating temperature avoids the drift of emission wavelength and minimize the probability of mode hopping. Stable operating conditions are realized by mounting the laser diode in a metal package together with a thermoelectric cooler and a monitoring thermistor. Widely used are 14-pin Dual-In-Line (DIL)- and Butterfly-packages. These devices will be delivered as pigtailed versions. OECA is using two different types of DIL and Butterfly-packages named DIL1, DIL2 and BF1, BF2 where the mechanical size is the main difference.

Applications for such modules with coupled multimode- or singlemode-fiber are

- *communication systems
- *measurement equipments
- *sensor devices

Thermal characteristics

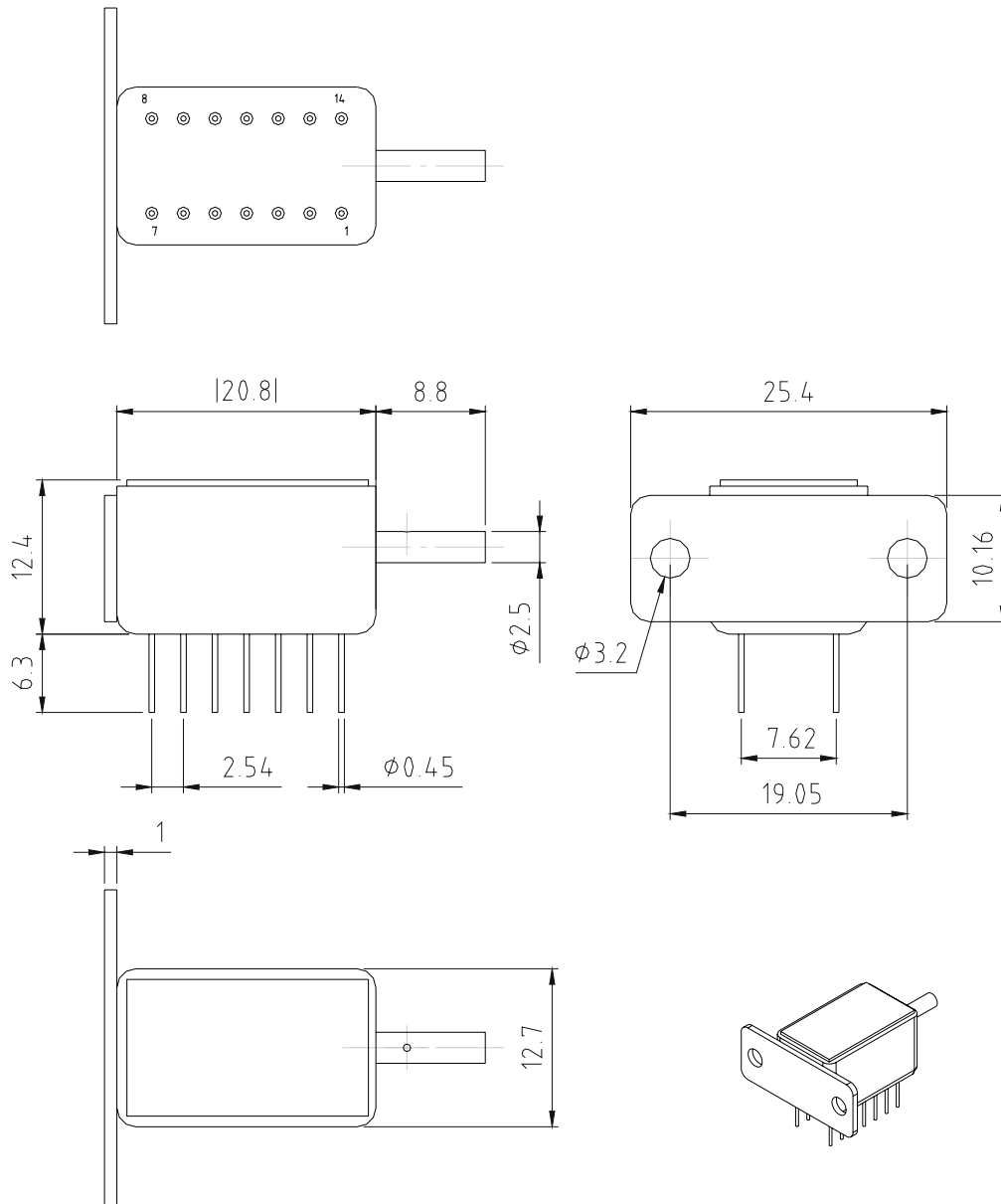
Parameter Thermistor/Peltiercooler	Symbol	Conditions	min.	typ.	max.	Unit
Thermistor Resistance	RN	TLD = 25°C	9,9	10,0	10,1	kΩ
Thermistor B Constant	B			3897		K
Cooling Capacity	ΔT	TC= 65°C	40			K
Cooler Voltage	VPE	ΔT = 40K TLD = 25°C			3,87	V
Cooler Current	IPE	ΔT = 40K TLD = 25°C			1,5	A

Pin out

Pin		Pin	
1	Cooler anode (+)	8*	Photodiode anode (+)
2	not connected	9*	Laserdiode cathode (-)
3	not connected	10*	Laserdiode anode(+)/case
4	not connected	11	Thermistor
5	Case	12	Thermistor
6	not connected	13	not connected
7*	Photodiode cathode (-)	14	Cooler cathode (-)

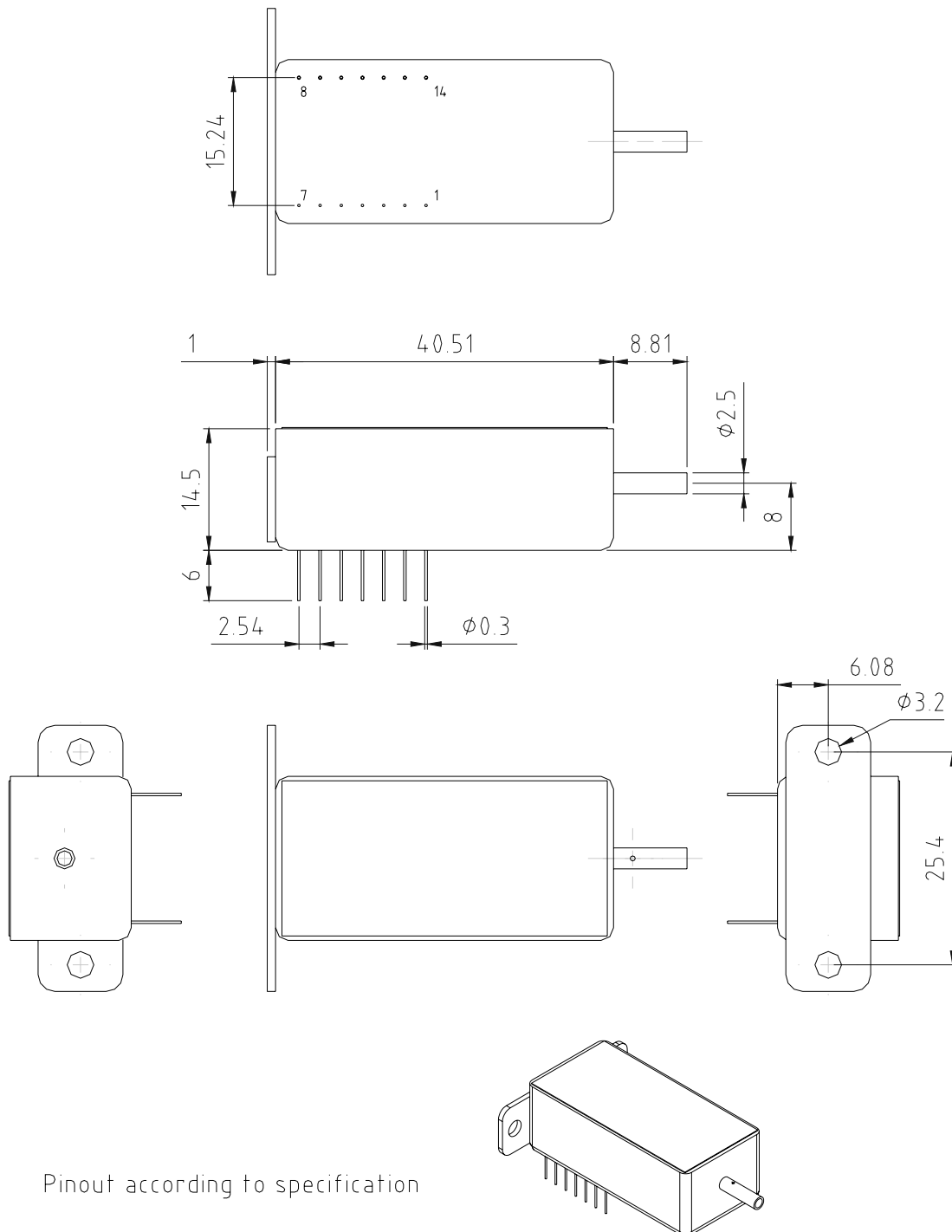
*additional connections are possible caused by internal pin-out of the used laserdiode

DIL 1



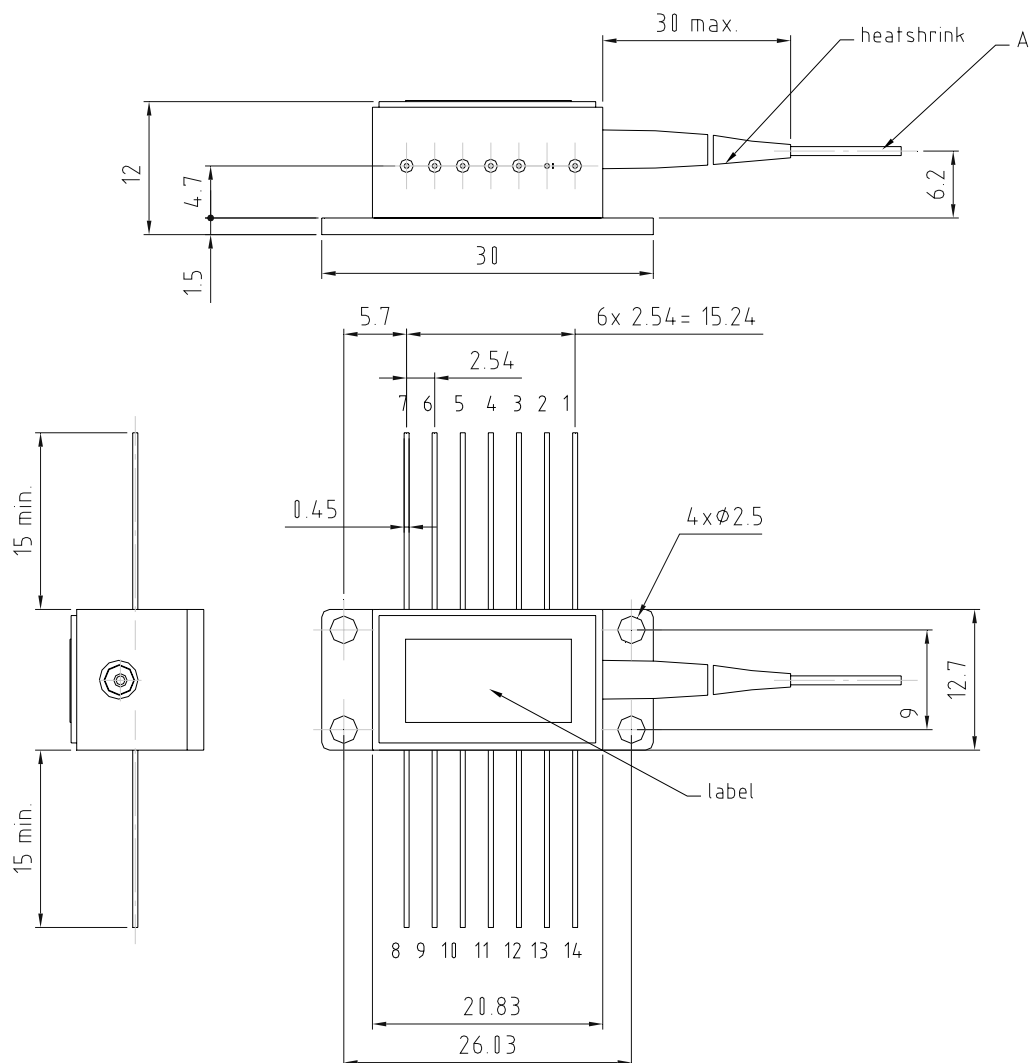
Pinout according to specification

DIL 2

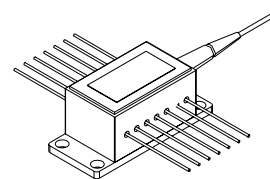


Pinout according to specification

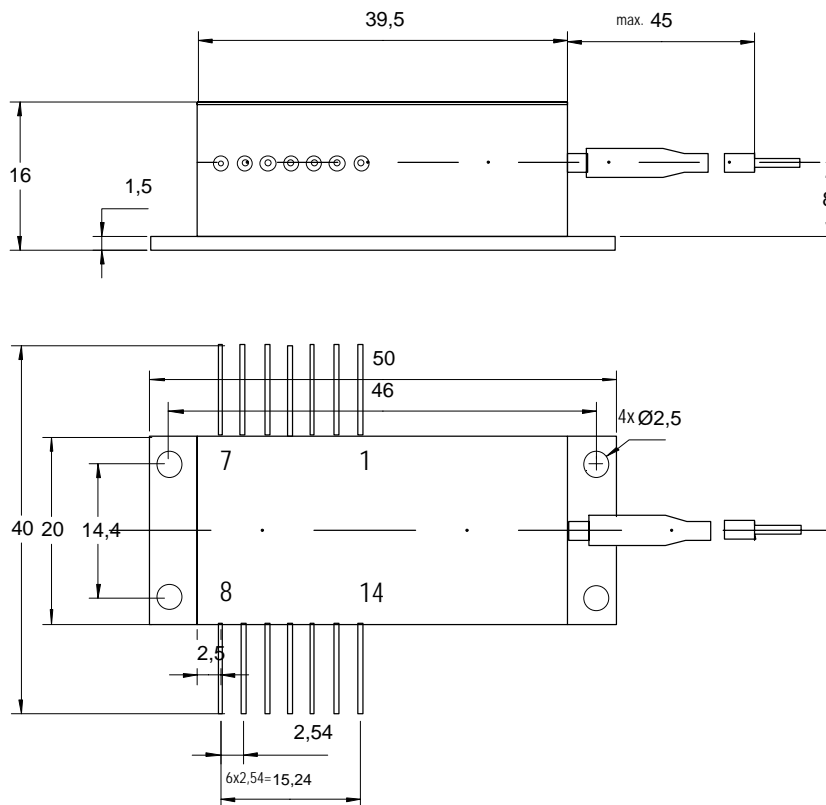
BF 1



A - optical fiber acc. to specification, typical length: 1m
pinout acc. to specification
tolerances acc. to DIN ISO 2768M
all dimensions in mm



BF 2



Pinout according to specification

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