

# GOA

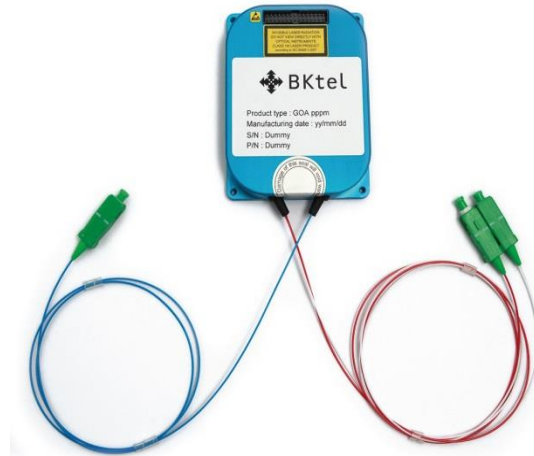
## Telecom Optical Amplifier in Multi-Source Agreement Format

### Applications

- ▶ Long-Haul, Metro and Access Networks
- ▶ Single Channel Networks
- ▶ Test & Measurement

### Features

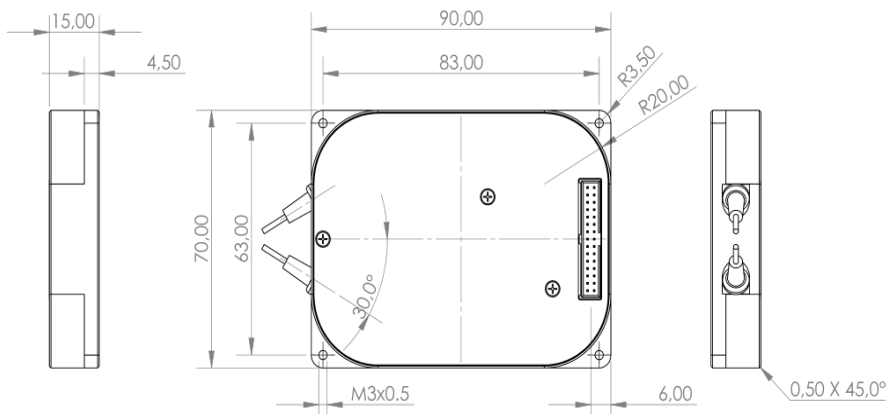
- ▶ High Output Power, up to +32dBm
- ▶ Compact MSA compliant package (70 x 90 x 15 mm)
- ▶ Low Noise Figure



### Parameter

Parameter		Parameter Range
Wavelength	[nm]	1530 ::: 1564
Output Power	[dBm]	Up to 32 dBm
Input Power Range	[dBm]	-14 ... +12
Noise Figure	[dB]	5.5
Polarization		Random / Linear
Power Stability	[%]	2
Optical Isolation	[dB]	30
Return Loss	[dB]	40
Fiber Termination / Connector		SC/APC, FC/APC, others
Power Supply Voltage	[V]	+3.3 / +5
Power Consumption	[W]	<25
Operating Case Temperature	[°C]	0 ... +70
Communication Interface		RS232 / IC2

### Mechanical Dimensions



### Ordering Information

Custom variants are available upon request, please contact our customer service to discuss your specification requirements.

Evaluation board available on request



Specifications are subject to change without notice

# HPOA-1

## 1 $\mu$ m-Band High Power Optical Amplifier

### Applications

- ▶ Airborne LIDAR
- ▶ Optical Tweezing
- ▶ Test & Measurement

### Features

- ▶ High Output Power, up to 5W
- ▶ Compact Package (150 x 170 x 25 mm)
- ▶ Digital Control System



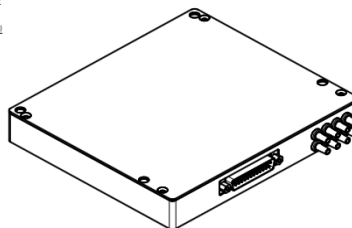
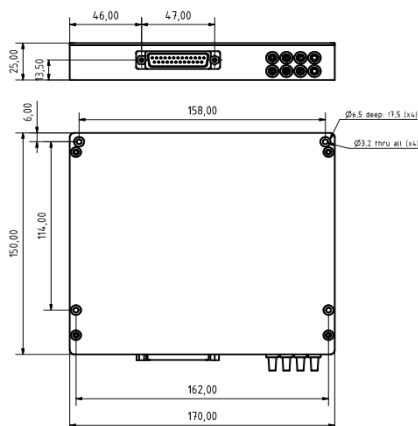
### Parameter

### Parameter Range

Parameter	Unit	Range
Wavelength	[nm]	1030 / 1053 / 1064 ... 1100
Output Power	[dBm]	Up to 37
Input Power Range	[dBm]	-10 ... +15
Noise Figure	[dB]	5.0
PDG	[dB]	0.5
PMD	[ps]	0.5
Optical Isolation	[dB]	30
Return Loss	[dB]	40
Fiber Termination / Connector		FC/APC, Collimator, others
Power Supply Voltage	[V]	+24
Power Consumption	[W]	<50
Operating Case Temperature	[°C]	0 ... +65
Communication Interface		RS232

### Mechanical Dimensions

### Ordering Information



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Evaluation board available on request



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# HPOA-1.5

## 1.55 $\mu\text{m}$ High Power Optical Amplifier

### Applications

- ▶ Telecom
- ▶ Free Space Communication
- ▶ LIDAR

### Features

- ▶ High Output Power, up to 5W
- ▶ Compact Package
- ▶ Digital Control System

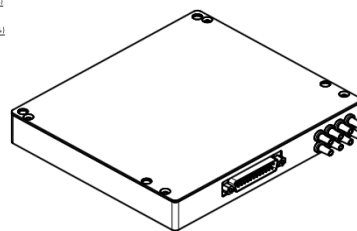
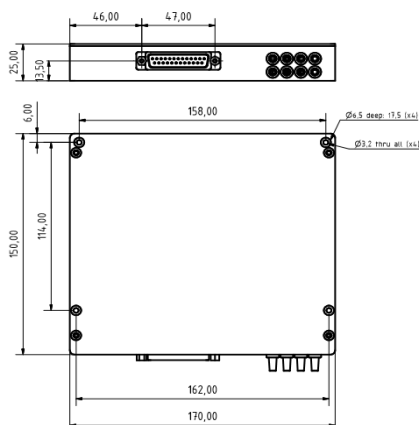


### Parameter

### Parameter Range

Parameter	Unit	Parameter Range
Wavelength	[nm]	1540 ... 1565
Output Power	[W]	Up to 5
Input Power Range	[dBm]	-10 ... +15
Noise Figure	[dB]	<5.5
Polarization		Random / Linear
Stability	[%]	<2
Optical Isolation	[dB]	30
Return Loss	[dB]	40
Fiber Termination / Connector		FC/APC, Collimator, others
Power Supply Voltage	[V]	+5 / +24
Power Consumption	[W]	<50
Operating Case Temperature	[°C]	-5 .. 65
Communication Interface		RS-232

### Mechanical Dimensions



### Ordering Information

Custom variants are available upon request, please contact our customer service to discuss your specification requirements.

Evaluation board available on request



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# THPOA-1

## 1 $\mu\text{m}$ Band, Ultra High Power Optical Amplifier

### Applications

- ▶ LIDAR,
- ▶ Industrial
- ▶ Multiple Laser Combination

### Features

- ▶ High Output Power, up to 40 Watts
- ▶ Low Noise Figure
- ▶ Single or Multiple Output Ports



### Parameter

### Parameter Range

Parameter	Unit	Parameter Range
Wavelength	[nm]	1030 / 1053 / 1064 ... 1100
Output Power	[dBm]	Up to +46
Input Power Range	[dBm]	-8 ... +15
Noise Figure	[dB]	5.5
Polarization		Random / Linear
Stability	[%]	2
Optical Isolation	[dB]	30
Return Loss	[dB]	40
Fiber Termination / Connector		SC/APC, FC/APC, others
Power Supply Voltage	[V]	AC 100 - 240
Power Consumption	[W]	< 200
Operating Case Temperature	[°C]	0 ... +70
Communication Interface		RS232 / GUI

### Mechanical Dimensions

### Ordering Information

Custom variants are available upon request, please contact our customer service to discuss your specification requirements.

Graphic User Interface.



Specifications are subject to change without notice

# THPOA

## 3U / Bench Top High Power Optical Amplifier

### Application

- ▶ Test & Measurement
- ▶ Free Space Optics

### Features

- ▶ High Output Power, up to +40 dBm
- ▶ Low Noise Figure
- ▶ 3U Bench top or Rack-mounted



### Parameter

Wavelength	[nm]	1540...1565			
Output Power	[dBm]	+30	+33	+37	+40
Input Power Range	[dBm]	-8...+15	-8...+15	-8...+15	-8...+15
Noise Figure	[dB]	5.5	5.5	5.5	5.5
Polarization		Random / Linear			
Stability	[%]	2			
Optical Isolation	[dB]	30			
Return Loss	[dB]	40			
Power Supply Voltage	[V]	AC 100 - 240			
Power Consumption	[W]	16	25	45	60
Operating Case Temperature	[°C]	0...+70			
Optical Connecto		SC/APC, FC/APC, others			
Communication Interface		RS-232 / GUI			

### Mechanical Dimensions

### Ordering Information

Custom variants are available upon request, please contact our customer service to discuss your specification requirements.

Graphic User Interface



Specifications are subject to change without notice



# THPOA-2

## 2 μm Band, Ultra High Power Optical Amplifier

### Applications

- ▶ LIDAR,
- ▶ Industrial
- ▶ Multiple Laser Combination

### Features

- ▶ High Output Power, up to 10 Watts
- ▶ Low Noise Figure
- ▶ Single or Multiple Output Ports



### Parameter

Parameter		Parameter Range
Wavelength	[nm]	1750 nm ..... 2050 nm
Output Power	[dBm]	Up to +40
Input Power Range	[dBm]	-8 ... +15
Noise Figure	[dB]	5.5
Polarization		Random / Linear
Control Mode		CC / PC
Optical Isolation	[dB]	30
Return Loss	[dB]	40
Fiber Termination / Connector		SC/APC, FC/APC, collimator
Power Supply Voltage	[V]	AC 100-240
Power Consumption	[W]	<60
Operating Case Temperature	[°C]	0 ... +70
Communication Interface		RS232 / GUI

### Mechanical Dimensions

### Ordering Information

Custom variants are available upon request, please contact our customer service to discuss your specification requirements.

Graphic User Interface.



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# TOA

## Bench Top, 1550nm Erbium Doped Optical Fiber Amplifier

### Application

- ▶ Test & Measurement

### Features

- ▶ High Output Power, up to 30 dBm
- ▶ User friendly Table top
- ▶ Stable Output Power



Specifications are subject to change without notice

Parameter		TOA-170	TOA-200	TOA-230	TOA-300
Wavelength	[nm]	1530 ... 1565			
Output Power	[dBm]		17	20	23 30
Output Power Tunability	[%]	10 ..100			
Mode of Operation		CW			
Polarization		Random (PDG<0.5 dB) / Linear (PER >20 dB)			
Output Power Stability	[%]	3			
Optical Output Isolation		30			
Noise Figure	[dB]	5			
Maximum Gain	[dB]	20		23	26 30
Input Power	[dBm]	-3 to +13			
Control Mode		CC / PC			
Power Supply Voltage	[V]	AC 100-240			
Operating Temperature	[°C]	15 .. 40			
Optical Connector		FC/APC, Collimator, others			
Optical Fiber type		NA			
Dimensions	[U]	1.5 U			
Communication Interface		RS-232			

### Ordering Information

Custom variants are available upon request, please contact our customer service to discuss your specification requirements.



Graphic User Interface