

Optical Fiber Amplifier
TOA⁺
Tail Optical Amplifier *Plus*
Fits in CFP2 platform



LiComm's unique TOA⁺ EDFA is small enough to fit into CFP2 units. This world's smallest and unique EDFA for Analog or Digital Coherent Optics ACO/ DCO, takes up little space as it fits into a CFP2 housing efficiently. It's a fully functioning optical amplifier engine with and without GFF. Designed for single wavelength applications in full extended c-band colorless 100G coherent ROADM system, it has a very stable optical power over -5 ~ 75°C matched with an extremely low power consumption. This makes it highly suitable for applications of power-equalization or pre-emphasis in densely packaged Communications systems

Features

- Fit in CFP2 Housing
- Ultra compact size (39.3 x 24.8 x 3.8 mm)
- Full EDFA Gain Block include GFF (Optional)
- Full C-band operating wavelength range
- Extremely low power consumption over wide operating temperature range

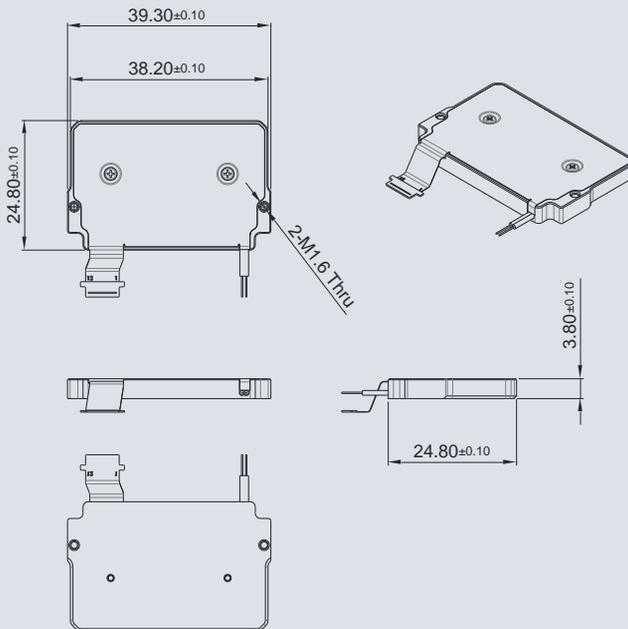
Applications

- CFP2-ACO or CFP2-DCO of Coherent Transceiver

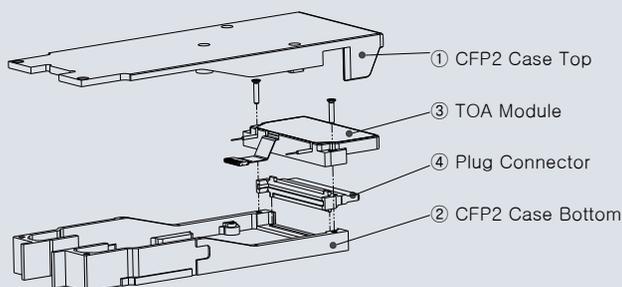
Optical Fiber Amplifier

TOA⁺ (Tail Optical Amplifier *Plus*)

Mechanical Dimension (39.3 x 24.8 x 3.8 [mm])



Assembly drawing (TOA⁺ into CFP2)



Optical Characteristics

Parameter	Symbol	Specification		Unit
		w/o GFF	w/ GFF	
Signal wavelength range	λ	1528.77 ~ 1568.36		nm
Operating input power	P_{IN}	-30 ~ 5	-30 ~ 5	dBm
Saturation output power ⁽¹⁾	P_{OUT}	Max.17	Max.12	dBm
Small signal gain ⁽²⁾	G_{SS}	Typ. 30	Typ. 30	dB
In-band OSNR ⁽³⁾	OSNR _i	Min. 40	Min. 40	dB
Out-band OSNR ⁽³⁾	OSNR _o	Min. 35	Min. 38	dB
Noise figure		Typ. 7.0		dB
Output optical isolation	O-ISO	Min. 20		dB
Return loss	RL	Min. 40		dB
Polarization mode dispersion	PMD	Max. 0.5		ps
Polarization dependent gain	PDG	Max. 0.5		dB

(1) Input Power = 0dBm

(2) Input Power = -30dBm, $P_{out} \geq +7$ dBm at 1545 nm

(3) Input Power = -10dBm, $P_{out} \geq 0$ dBm over operating wavelength range

Electric & Environmental Characteristics

Parameter	Typical Value
Operating case temperature	-5 ~ 75 °C
Storage temperature	-40 ~ 85 °C
Storage humidity	5 ~ 85 % R.H
Power consumption ⁽¹⁾	≤ 1.26 W

(1) at Max. output power in normal input power =0dBm and full temperature range
 Max. P_{Tot} is less than 1.0W at $P_{out} = +10$ dBm or less.

Ordering Information

OFG	-	TCJ	-	xx ₁ AC	-	yy ₁ y ₂	-	zz ₁
				XX ₁ : Max. Output Power (dBm)				
				YY ₁ : NA(Not available), GF(GFF)				
				Y ₂ : I(IPM), Not available without IPM				
				ZZ ₁ : LU(LC/UPC), LA(LC/APC)				

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