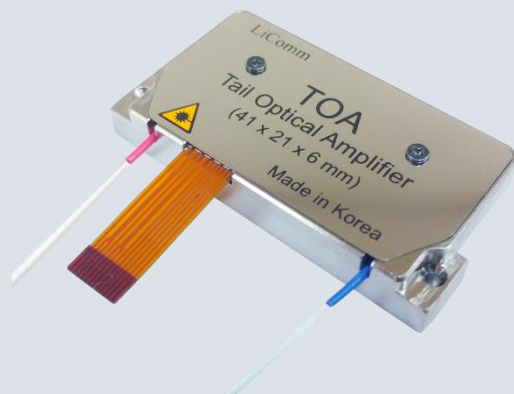


Optical Fiber Amplifier
TOA
Tail Optical Amplifier
Fits in CFP2 platform

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 VOA, TOF or both inside, or can include 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 6.2 mm)
- Full EDFA Gain Block include VOA, TOF ,VOA + TOF, GFF (Optional)
- Full C-band operating wavelength range
- Extremely low power consumption over wide operating temperature range

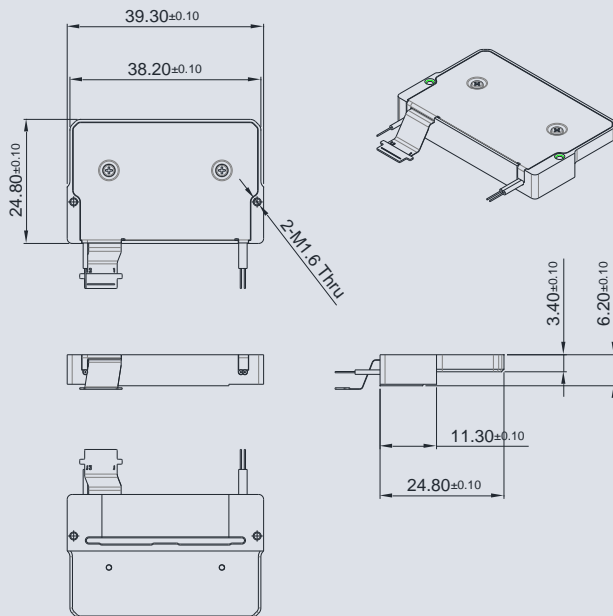
Applications

- CFP2-ACO or CFP2-DCO of Coherent Transceiver

Optical Fiber Amplifier

TOA (Tail Optical Amplifier)

Mechanical Dimension (39.3 x 24.8 x 6.2 [mm])



Optical Characteristics

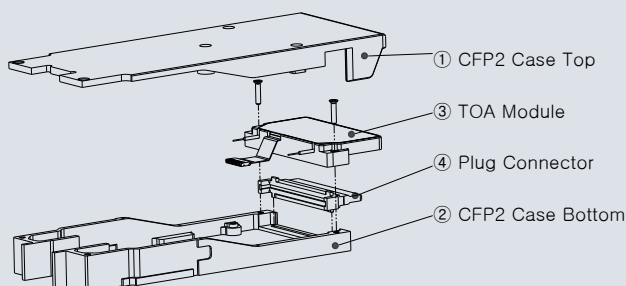
Parameter	Symbol	Specification			Unit
		w/ TOF+VOA	w/o TOF+VOA	w/ GFF	
Signal wavelength range	λ	1528.77 ~ 1568.36			nm
Operating input power	P_{IN}	-20 ~ 5	-30 ~ 5	-30 ~ 5	dBm
Saturation output power ⁽¹⁾	P_{OUT}	Max.12	Max.17	Max.12	dBm
Small signal gain ⁽²⁾	G_{SS}	-	Typ. 30	Typ. 30	dB
In-band OSNR ⁽³⁾	OSNR _i	Min. 40	Min. 40	Min. 40	dB
Out-band OSNR ⁽³⁾	OSNR _o	Min. 40	Min. 35	Min. 38	dB
Noise figure		Typ. 7.0			dB
Filter tuning range	FTR	1528~1568	-	-	nm
Attenuation range	VOA	Min. 20	-	-	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) w/ TOFA+VOA : Input Power = -30dBm, $P_{out} \geq 0$ dBm at 1545 nm
 w/o TOFA+VOA : Input Power = -30dBm, $P_{out} \geq +7$ dBm at 1545 nm
 w/ GFF : Input Power = -30dBm, $P_{out} \geq +7$ dBm at 1545 nm

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

Assembly drawing (TOA into CFP2)



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	-	TCE	-	xx ₁ AC	-	yy ₁ y ₂	-	zz ₁
				XX ₁ : Max. Output Power (dBm)				
				YY ₁ : NA(Not available), VA(VOA), TF(TOF), AF(VOA+TOF), GF(GFF)				
				Y ₂ : I(IPM), Not available without IPM				
				ZZ ₁ : LU(LC/UPC), LA(LC/APC)				

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