

Preliminary Data Sheet

PF03, PFO4 40-860 MHz. Ultra-linear Opto Receiver Amplifier



Features

- Ultra High Linearity with Low Noise
- Independent DC Supply pin for Optical diode (PFO4 Model)

Available connectors & applicable dash #'s

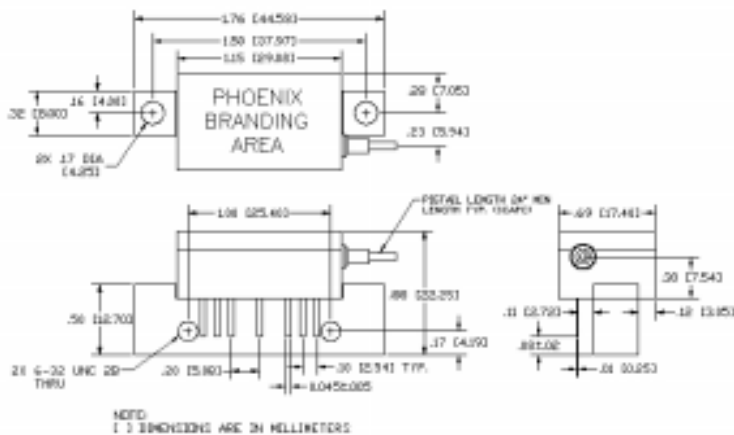
- FC/APC - FCAPC SC/APC - SCAPC
- FC/PC - FCPC ST - ST

Unit without a connector has no dash number

Electrical Specifications @ Tcase = 30°C (Referenced to 75 ohms)

Parameter	Typical Conditions	Min. Value	Max. Value	Units
Frequency Range		40	860	MHz.
Responsivity (R_λ)	$\lambda = 1300\text{nm}$.	800		V/W
Optical Wavelength (λ)		1290	1600	nm.
Spectral Density	$\lambda = 1310 \pm 20\text{nm}$.	0.85		A/W
	$\lambda = 1550 \pm 20\text{nm}$.	0.90		A/W
Gain Flatness (peak to valley)	f=40MHz To 860MHz. @ $\lambda = 1300$		1.0	dB.
Optical Input Return Loss	with SC/APC and FC/APC Connectors	40		dB.
Output Return Loss Referenced to 75 ohms	f= 40 To 860MHz.	16		dB.
3 rd Order Intermods (IMD_3) (Two laser test) Pin #1=1.0v	f ₁ = 326.25MHz, f ₂ = 333.25MHz., f ₃ = 335.25MHz. P _{1,2,3} =0.33mw. f ₄ =f ₁ +f ₂ -f ₃ =324.25MHz= meas. freq.	80		dBc.
2 nd Order Intermods (IMD_2) (Two laser test) Pin #1= 1.0v	f ₁ = 135MHz, f ₂ = 189.25MHz., P _{1,2} =0.50mw. f ₃ =f ₁ +f ₂ =324.25MHz.= meas. frequency	70		dBc.
Optical Power Monitor Voltage @ Pin #1)	Pin #1 internally connected to a 10K Ω series R to measure photo diode current across a 1K Ω to ground	0.8		V/mW.
Equivalent Input Noise (E_m)	f ₁ =40MHz.		7.0	pA/ $\sqrt{\text{Hz}}$
Total Current (I_{TOT})	@ Voltage of +24v		240	mA.

Outline Drawings



Maximum Ratings

- Storage Temperature -40°C to +85°C
- DC Voltage +28 volts
- Optical Input Power +10 dBm.
- Operating Base Temperature -20 to +85°C
- Fiber Bending Radius 1.3" min.
- Fiber Pull Strength 0.5 kilograms

Pin Configuration

Pin #	Description
1	monitor current
2,3,7,8	Ground
4 (PFO4 only)	Optical diode detector +V
5	RF Amplifier +V
6	not used
9	Output