

## NIR-MX-LN-40 (Preliminary-Edition May 23<sup>rd</sup>)

All specifications given at 25°C, 1060 nm, unless differently specified

ELECTRICAL				
		Min	Typ	Max
Electro-optic bandwidth $S_{21}$ @-3 dB, from 2 GHz	GHz	25	30	-
Usable Modulation Bandwidth	GHz	-	40	-
Optical rise time / fall time (10% - 90%) <sup>(1)</sup>	ps	-	10 / 10	-
Electrical return loss $S_{11}$ 0-20 GHz	dB	-	-15	-10
Vpi RF electrodes @ 50kHz	V	-	4.5	-
Vpi DC electrodes	V	-	4.5	5
Ripple $S_{21}$	dB	-	0.5	1
RF port impedance matching	$\Omega$	-	50	-
DC port impedance matching	M $\Omega$	1	-	-
OPTICAL				
Crystal	Lithium Niobate X-Cut Y-Prop, specific substrate			
Waveguide process	Proton Exchange			
Operating wavelength	nm	980	1064	1150
Insertion loss (without connector)	dB	-	3.5	4.5
DC Extinction ratio (measured with narrow source, linewidth $\leq$ 200 MHz)	dB	20	23	-
	dB	25 <sup>(2)</sup>	27	-
	dB	30 <sup>(2)</sup>	35	-
Polarization Extinction Ratio	dB	20	-	-
	dB	20	25	-
High Polarization Extinction Ratio	dB	25 <sup>(2)</sup>	30	-
Optical return loss	dB	-40	-45	-
Chirp	-	-0.1	-	+0.1
MONITORING PD				
Photodiode Responsivity	A/W	-	-	-
Photodiode Extinction ratio	dB	-	-	-
Photodiode Bias Shift	$^{\circ}$	-	-	-
Photodiode Reverse Voltage	V	-	-	-
INTERFACES				
Input / Output fibers	Polarization maintaining 980 nm, Corning PM 98-U25D length : 1.5 meter, buffer diameter : 900 $\mu$ m			
Package size	85 x 15 x 9.65 mm <sup>3</sup>			
Input RF connector	Female K			
DC electrodes and PD connectors	pins			
Optical connectors	FC/APC – FC/UPC			
Optical connectors orientation	slow axis parallel to connector key			
ENVIRONMENTAL				
Operating temperature	0°C to +70°C			
Storage temperature	-40°C to +85°C			
MAXIMUM RATINGS				
Maximum RF input power (CW mode)	+28dBm			
Bias voltage range	V	-20	-	20
Maximum optical input power (CW mode)	+20dBm			

(1) : Optical response to a perfect square shape electrical signal.

(2) : Option available without optical connectors or with FC/APC optical connectors.



