

Polymer Slot® O-Band Modulator

Lightwave Logic's O-Band Polymer Slot® modulator is a high speed Mach-Zehnder modulator in a push-pull configuration offering high RF bandwidth supporting high data transmission rates and low drive voltage for energy efficient applications.

The high speed and low drive voltage are enabled by Lightwave Logic's proprietary high performance, high stability electro-optic chromophores.

Polymer Slot® modulators are targeted for use in high speed data center interconnects such as 800 Gb/s and 1.6Tb/s applications.

Applications

- Data center interconnects
- Other data comm and short reach applications
- Quantum and AI computing

Product Highlights

- High RF bandwidth
- Low drive voltage
- Small form factor

Table 1. Polymer Slot® O-Band Modulator Specifications

Symbol	Parameter	Min	Typical	Max	Units	Comments
V_π	V _π @ 1 KHz	-	-	3	V	
BW	EO Bandwidth @ 3 dB	40	70	-	GHz	at 3 dB
Z_c	Characteristic Impedance	-	50	-	Ohm	
IL	Optical Loss (F2F)	-	12		dB	
ER	DC Extinction Ratio	15	20	-	dB	
λ	Operating Wavelength	1260	-	1340	nm	O-Band
OT	Operating Temperature	0	-	85	°C	
ST	Storage Temperature	-40	-	85	°C	

About Lightwave Logic Inc.

Lightwave Logic is a wholly US-based company with in-house materials synthesis, device and package design, wafer fabrication and testing capabilities. Contact Lightwave Logic for any specific performance requirement

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