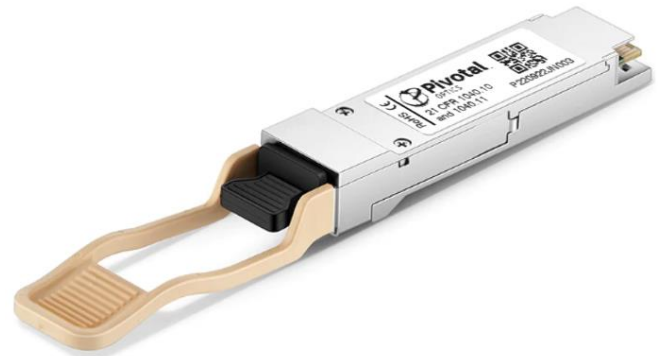


QSFP-40G-SR4

40GBase QSFP+ SR4 850nm MMF 100m(OM3)/150m(OM4) Transceiver

Product Features

- Support up to 40Gb/s bit rates
- Hot-pluggable QSFP+ Built-in digital diagnostic
- Maximum link length over MMF:
 - 100m (OM3) / 150m (OM4)
- 850VCSEL laser and PIN photodiode
- QSFP+ MSA package with MPO connector
- +3.3V power supply
- Power dissipation < 1.5W
- RoHS Compliant
- Case operating temperature:
 - Commercial: 0 ~ 70°C



Product Applications

- 40GBASE-SR4
- QDR

I. Maximum Ratings

Exceeding the limits below may damage the transceiver module permanently.

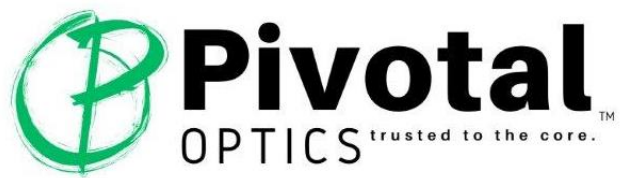
Parameter	Symbol	Min.	Typ.	Max.	Units
Storage Temperature	Ts	-40		+85	°C
Power Supply Voltage	Vcc	0		3.6	V
Relative Humidity	RH	0		85	%
Maximum Optical Input Power	Pin	3.4			dBm

II. Operating Specifications

Parameter	Symbol	Min.	Typ.	Max.	Units	Notes
Case Operating Temperature	TC	0		70	°C	Commercial
Power Supply Voltage	Vcc	3.135	3.3	3.465	V	
Power Supply Current	Icc			430	mA	
Power Dissipation	PD			1.5	W	
Data Rate, each Lane	DR		10.3125		Gb/s	
Link Distance (OM3 MMF)	D			100	M	OM3
Link Distance (OM4 MMF)	D			150	M	OM4

QSFP-40G-SR4

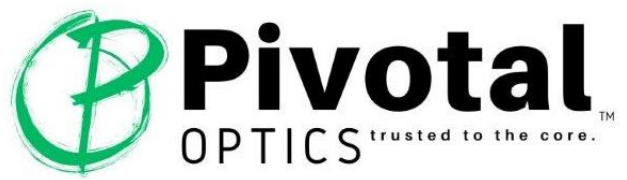
40GBASE, QSFP+, SR4, MMF TRANSCEIVER
 850nm, 100m/150m REACH, MTP/MPO CONNECTOR

**III. Optical Characteristics**

Parameter	Symbol	Min	Typical	Max	Unit	Notes
Transmitter						
Center Wavelength	λ_C	840	850	860	nm	
RMS Spectral Width	$\Delta\lambda_{rms}$			0.65	nm	
Avg. Optical Launch Power (each lane)	P_{avg}	-7.6		2.4	dBm	
Optical Modulation Amplitude (each lane)	POMA	-5.6		3.0	dBm	
Difference in launch power between any two lanes (OMA)	$P_{tx,diff}$			4.0	dB	
Launch Power in OMA minus TDP (each lane)		-6.3			dBm	
Transmitter and Dispersion Penalty (each lane)				3.5	dB	
Extinction Ratio	ER	3			dB	
Peak Power				4	dBm	
Optical Return Loss Tolerance	TOL			12	dB	
Encircled Flux		$\geq 86\%$ at 19um $\leq 30\%$ at 4.5um				
Average Launch Power OFF Transmitter (each lane)	P_{off}			-30	dBm	
Receiver						
Center Wavelength	λ_C	840		860	nm	
Average Receive Power (each lane)	P_{avg}	-9.5		2.4	dBm	
Receiver Reflectance	RR			-12	dB	
Receive Power (OMA), (each lane)				3.0	dBm	
Stressed Receiver Sensitivity (OMA), each Lane				-5.4	dBm	
Peak Power				4	dBm	
LOS Assert	LOSA	-30			dBm	
LOS De-assert	LOSD			-22	dBm	
LOS hysteresis	LOSH	0.5			dB	

QSFP-40G-SR4

40GBASE, QSFP+, SR4, MMF TRANSCEIVER
850nm, 100m/150m REACH, MTP/MPO CONNECTOR



IV. Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Transmitter						
Differential Input Voltage Swing	V _{in,pp}	500		1600	mV	
Differential Input Impedance	Z _{in}		100		Ohm	
Input High Voltage (ResetL-LPMode)	V _{IH}	+2.0		V _{cc}		
Input LOW Voltage (ResetL-LPMode)	V _{IL}	0		+0.8		
Receiver						
Differential Output Voltage Swing	V _{out,pp}	300		850	mVpp	
Differential Output Impedance	Z _{out}	90	100	110	Ohm	
Output High Voltage (IntL)	V _{OH}	V _{cc} -0.5		V _{cc}		
Output LOW Voltage (IntL)	V _{OL}	0		+0.4		

Warranty

All transceivers feature a limited lifetime warranty.

Disclaimer

External physical characteristics are subject to variation. This may include, but is not limited to, external case designs, pull tab colors and/or shapes, removal latch styles or colors, and label sizes and placement. These variations do not affect the function or characteristics of the transceivers.