

**Introduction:**

Short Wavelength Division Multiplexing (SWDM) is a wavelength division multiplexing (WDM) technology that utilizes four wavelengths across the 850 to 940nm range. The new 40G-SWDM4 and 100G-SWDM4 Ethernet standards operate over a pair of multimode fibers, while utilizing four wavelengths; 850nm, 880nm, 910nm and 940 nm to achieve 40G or 100G transmission rates. Earlier standards required an MPO connector and 8 or 10 fibers to accomplish the same transmission rates. While SWDM will operate over OM3, OM4 or OM5 fiber, OM5 is all about extending the distance. See Table 1 for a comparison of network distances versus fiber type. The TIA has specified lime green as the official cable jacket color for OM5.



OM5 Wideband Multimode Duplex Plenum 50/125 LC (Clipped)

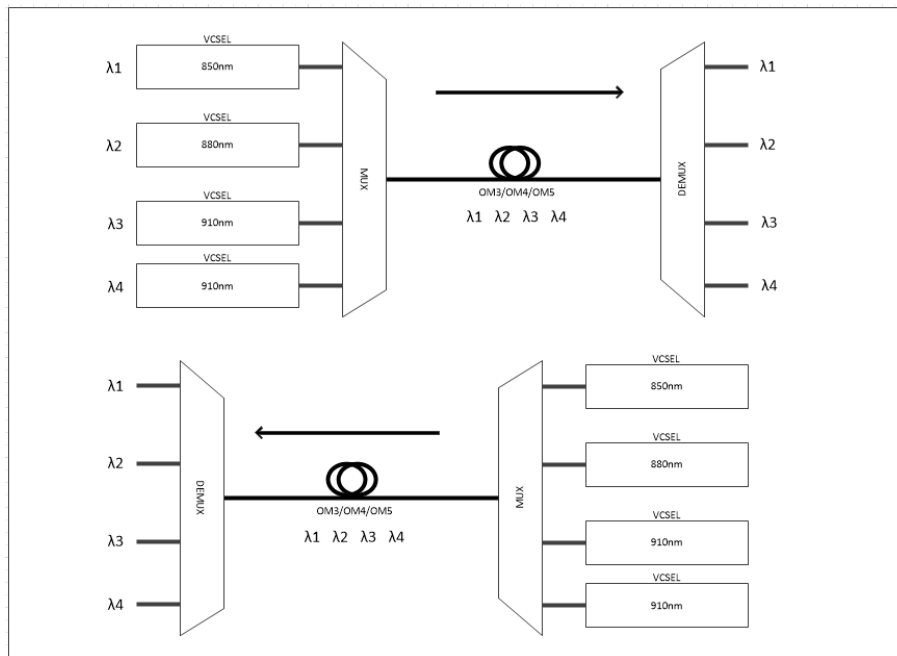


Figure 1: 100GbE (4x25GbE/Wavelength 2-Fiber SWDM)

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**What are the expected SWDM data rates and distances?**

The 40/100GbE expected maximum operational distances are given in the table below.

	OM3	OM4	OM5
40G SWDM	240 m	350 m	440 m
100G SWDM	75 m	100 m	150 m

<b>Cable &amp; Connector Specifications:</b>	
Fiber Type OM5	50/125 Multimode Duplex Fiber Pair
Insertion Loss Per Connector	<0.4dB, Typical 0.25dB
Fiber Height	< 100nm
Repeatability	> 500 Cycles
Operating Temperature	-40°C To +75°C
Humidity Range	5% To 95% (Non-Condensing)
Strain Relief Boot Lengths	1.4cm, 2cm, 2.9cm Available
Standard Compliance	Telcordia
Cable Size and Rating	2mm Plenum Duplex

<b>OM5 Wideband Multimode Duplex Plenum 50/125</b>		
F9C22L2GCCXXX	OM5 Wideband Multimode 50/125um (WBMMF), Lime Green, Duplex 2mm Plenum, LC-LC Clipped	Specify Length When Ordering
F9C22L2GCCYXXX	OM5 Wideband Multimode 50/125um (WBMMF), Lime Green, Duplex 2mm Plenum, LC Clipped-SC Yoked	Specify Length When Ordering
F9C22L2GCYXXX	OM5 Wideband Multimode 50/125um (WBMMF), Lime Green, Duplex 2mm Plenum, SC-SC Yoked	Specify Length When Ordering
F9C42L2GCSSXXX	OM5 Wideband Multimode 50/125um (WBMMF), Lime Green, MicroDual Plenum, LC Switchable Uniboot-LC Switchable Uniboot	Specify Length When Ordering
F9C42L2GCSYXXX	OM5 Wideband Multimode 50/125um (WBMMF), Lime Green, MicroDual Plenum, LC Switchable Uniboot-SC	Specify Length When Ordering

**Other Connector Combinations available.**