

## Multimode Transmit or Receive Optical Subassembly (TOSA/ROSA)

Aimed at the growing market for high-performance fibre-based video and data link extensions, Omron has introduced a new multi-channel, multi-wavelength transmitter and receiver optical subassembly (TOSA/ROSA) solution, integrating into a single device capabilities that would previously have required two or more individual devices.

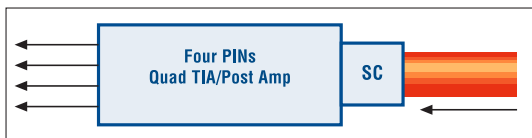
The assemblies are based on recently acquired Aduro's patented "Afterburner" technology, which is combined with Omron's precision assembly and moulding technologies to create new devices that change the way high-speed optical communications are designed. The Afterburner SX4 range of integrated CWDM-based TOSA/ROSA solutions is aimed at SX4 (850 nm) applications, including video and data transmission over 50, 62.5µm multimode and plastic optical fibre. These include optical fibre link extensions for video and data distribution in environments including film and TV studios, security systems and SANs over distances from 15 to 300m.

The SX4 can be custom-configured to operate from 2 to 8 channels and is designed to meet the Fibre-Channel 10 GbE standard. The TOSA has LVPECL Input, 4 X SW VCSEL and Quad Laser Driver. It can transmit over 100m of FDDI-grade multimode fibre (155 Mb/s- 3.125 Gb/s per channel).



### Structures

P1-RX Functional Block



P1-TX Functional Block



### Specifications

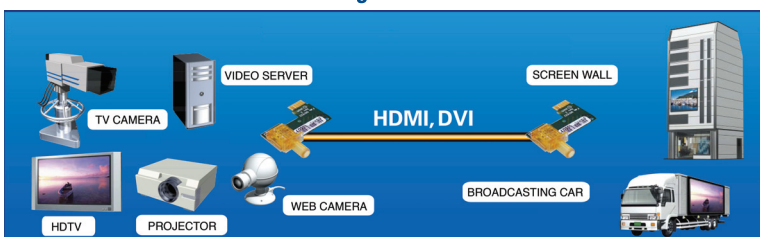
Parameter	P1-RX			P1-TX			Units
	Min	Type	Max	Min	Type	Max	
Data rate SX4v	0.1552		1.65	0.1552		1.65	Gbps
SX4d	0.1552		3.125	0.1552		3.125	
Differential Voltage	500	700	900	400		1600	mVp-p
Max. Temperature (Ceramic)	0		70	0		70	°C
OMA Sensitivity at Max Data Rate	-14.25	-16.25		-6.25			dBm
Wavelength Range	771.5		856.5	771.5		856.5	nm
Peak Optical Power (/Ch)			+1.0			+1.0	dBm
Optical Rise/Fall Time						110	Ps
Input Differential Impedence					100	110	Ps
Power Consumption (3.3V)		660	858		858	967	mW

### Applications

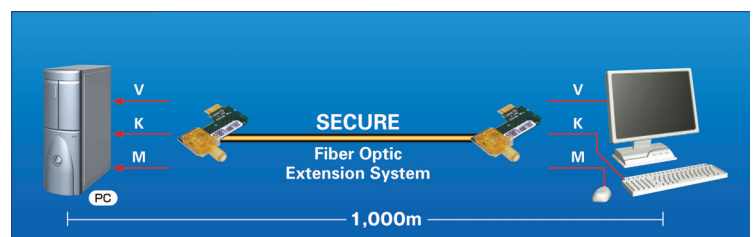
#### Home



#### Broadcasting Station



#### Office

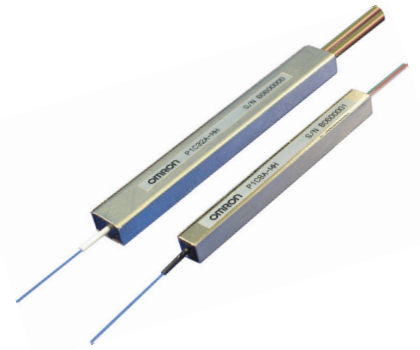


## Optical Splitter P1C

Omron has extended its range of compact bi-directional PLC splitter modules for Passive Optical Networks with a new 1x64 version.

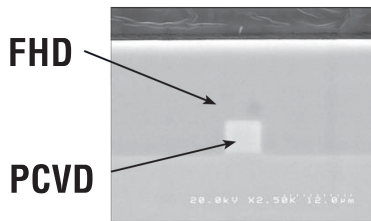
Omron P1C planar waveguide devices are ideal for FTTx Passive Optical Networks, DWDM and CWDM systems, optical cable TV and other outside equipment applications. The new 1x64 version complements the existing 1x4, 1x8, 1x16 and 1x32 splitters already available.

Each device in the range is a packaged optical waveguide chip based on patented plasma chemical vapour deposition (P-CVD) technology. The combination of PLC structure and P-CVD process technology provide exceptional stable optical characteristics and superior reliability compared with fused-fibre biconical taper (FBT) technology. In addition, the splitter modules exhibit low insertion loss, low polarisation dependent loss and high port uniformity. The splitters are tested to Telcordia GR1209 and GR1221.

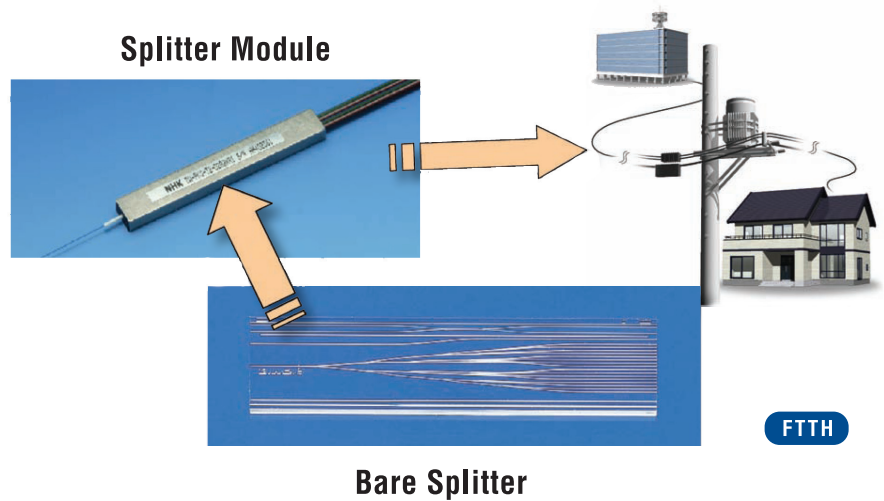


## Applications

- FTTH, FTTB, FTTC
- Telecom
- Datacom
- LANs, CATV



Plasma Chemical Vapor Deposition and Flame Hydrolysis Deposition are used to make a low loss splitter.



## Splitter Module Specifications

		1 x 4	1 x 8	1 x 16	1 x 32
		P1C4A-M	P1C8A-M	P1C16A-M	P1C32A-M
Operational Wavelength (nm)		1260 ~ 1360 / 1480 ~ 1600			
Insertion Loss (dB)	Max	≤ 7.5	≤ 11.0	≤ 13.7	≤ 17.0
Insertion Loss (dB)	Uniformity	≤ 0.8	≤ 1.0	≤ 1.0	≤ 1.3
PDL (dB)		≤ 0.3	≤ 0.3	≤ 0.3	≤ 0.3
Return Loss (dB)		≥ 50	≥ 50	≥ 55	≥ 55
Operating Temperature		- 40 ~ + 85			
Module Size W x H x L (mm)		4 x 4 x 40		7 x 4 x 52	

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