

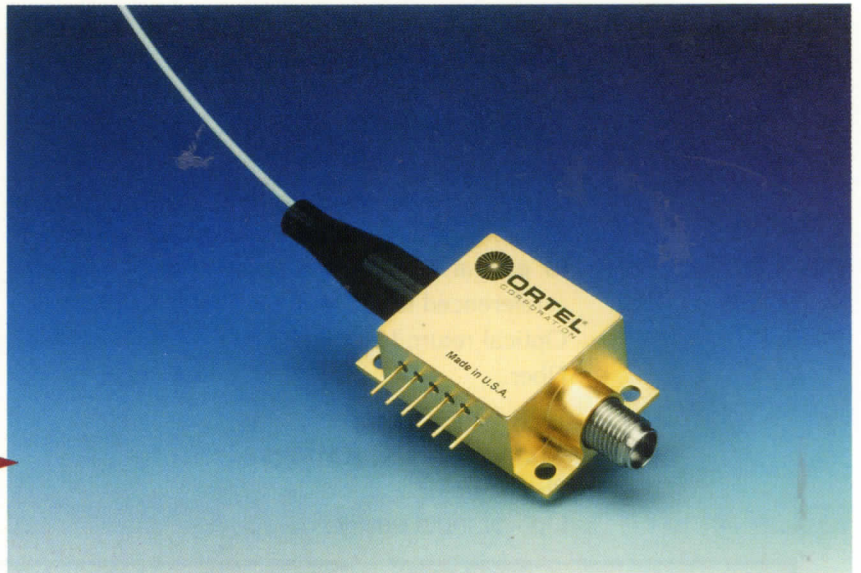


# HIGH POWER PHOTODIODE RECEIVERS

**Model 2518A (Module)**  
**Model 4518A (Flange-mount)**  
**Model 10458A (Plug-in)**

*These products can significantly improve the gain, noise, and dynamic range of optical links because of their ability to use 7.5 times the optical power acceptable with older designs.*

**Frequencies up to 15 GHz**  
**Optical input powers of 15 mW now achievable**



## Products for 15 GHz Optical Links

High dynamic range optical links have found use in a wide variety of applications including RF and microwave antenna remoting, delay lines, EW systems and cable television. Throughout these fields, one of the fundamental limits that affects short and high power links is the amount of optical power that receivers can withstand. As many photodiodes are specified to only about 2 mW, optical attenuators often must be inserted along the fiber, which unfortunately also decreases RF gain and increases noise.

With Ortel's new high power photodiodes, optical powers up to 15 mW can not damage the device or degrade the linearity for frequencies up to 15 GHz. This improvement in power handling performance has already created excitement within the fiber linking community. The Air Force's Rome Lab was so convinced of the benefit of such devices that they supported much of the development effort at Ortel.

To take advantage of this latest advancement from Ortel, call us with your requirements today.



Making Light Work For You  
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## PRODUCT SPECIFICATIONS

### RF Parameters

Frequency Range	0.5 to 15 GHz
Amplitude Flatness <sup>1</sup>	+1, -3 dB
Output VSWR	2.0 : 1
RF connector	
2518A	K-connector <sup>TM2</sup> (SMA compatible)
4518A/10458A	SMA (F)
Impedance-matched output	50 Ohm

### Optical Parameters

Wavelength	1250 to 1600 nm
DC photodiode responsivity (at bias pin)	> 0.7 mA/mW at 1310 nm & 1550 nm
RF gain at 1 GHz referenced to DC gain	> -7 dB
Optical return loss <sup>3</sup>	> 45 dB
Fiber	Singlemode (9/125)

### Maximum DC Ratings

Photocurrent	12 mA
Optical input power <sup>4</sup>	15 mW (typical)

	2518A <sup>5</sup>	4518A <sup>5</sup>	10458A <sup>5</sup>
Size (inches)	1.53 x .66 x .42	6.0 x 5.0 x 1.5	9.12 x 5.06 x 1.39
Operating Temp.	-40 to +70°C	-40 to +70°C	0 to +50°C
Storage Temp.	-40 to +85°C	-40 to +85°C	-20 to +65°C
DC bias	+10 V	+15 V @ 0.2 A	+15 V @ 0.2 A
Power On LED	no	yes	yes
Optical Power LED	no	no	yes
Low Power Alarm	no	yes	yes

1. Relative to value at 1 GHz.
2. K-connector <sup>TM</sup> is a Wiltron Company trademark.
3. For FC-APC fiber connector or fusion splices. Other connectors may degrade performance.
4. 15 mW may be exceeded provided the photocurrent remains below 12 mA.
5. The 2518A, 4518A, and 10458A are mechanically identical and pin-compatible with the 2516A, 4516A, and 10456A, respectively.

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