Optical Circulator (Three-Port)

Features and Benefits

- Ultra-Low PDL and PMD
- High Return Loss
- High Isolation
- Low Insertion Loss
- Epoxy-Free in Optical Path

Standards

RoHS               Free of hazardous substances according to RoHS2011/65/EU

Design and Test Criteria

Product is qualified to Telcordia GR-1209-CORE and GR-1221-CORE

Optical circulators are non-reciprocal devices that redirect light from port-to-port sequentially in only one direction. In advanced optical communication systems, circulators are used for bi-directional transmissions, WDM networks, fiber amplifier systems, and for optical time domain reflectometer (OTDR) measurements. Corning's circulator features small package, high isolation over a wide wavelength range, low insertion loss, low PDL, and excellent stability.
# Optical Circulator (Three-Port)

## Specifications – Optical Circulator (Three-Port)

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Standard</th>
<th>Premium</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Minimum</td>
<td>Typical</td>
</tr>
<tr>
<td>Center Wavelength $\lambda_c$</td>
<td>1310 or 1550 nm</td>
<td>1310 or 1550 nm</td>
</tr>
<tr>
<td>Isolation ($\lambda_c \pm 20$ nm, 23°C, 2-1 or 3-2)</td>
<td>40 dB</td>
<td>50 dB</td>
</tr>
<tr>
<td>Insertion Loss ($\lambda_c \pm 15$ nm, 23°C)</td>
<td>0.8 dB</td>
<td>0 dB</td>
</tr>
<tr>
<td>Insertion Loss ($\lambda_c \pm 20$ nm, 0-70°C, All SOP)</td>
<td>1.0 dB</td>
<td>50 dB</td>
</tr>
<tr>
<td>WDL</td>
<td>0.20 dB</td>
<td>0.20 dB</td>
</tr>
<tr>
<td>Directivity</td>
<td>50 dB</td>
<td>50 dB</td>
</tr>
<tr>
<td>PDL</td>
<td>0.20 dB</td>
<td>0.15 dB</td>
</tr>
<tr>
<td>Return Loss</td>
<td>50 dB</td>
<td>50 dB</td>
</tr>
<tr>
<td>Power Handling</td>
<td>500 mW</td>
<td>500 mW</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>0°C to +70°C</td>
<td>0°C to +70°C</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-40°C to +85°C</td>
<td>-40°C to +85°C</td>
</tr>
<tr>
<td>Tensile Load</td>
<td>5N</td>
<td>5N</td>
</tr>
</tbody>
</table>

## Shipping Package

<table>
<thead>
<tr>
<th>Packaging Dimensions</th>
<th>Pigtail Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>($\phi$) 5.5 mm x (L) 60.0 mm</td>
<td>1 m (Standard)</td>
</tr>
</tbody>
</table>

## Three-Port Circulator
Optical Circulator (Three-Port)

Ordering Information

Optical Circulator (Three-Port)

C R [ ] - 1 [ ] [ ] [ ] - [ ] [ ] [ ]

1 Select Type
3: Three-port

2 Select Wavelength
31: 1310 nm
55: 1550 nm
59: 1590 nm

3 Select Grade
1: Standard
2: Premium

4 Select Fiber Type
0: 250 µm Bare Fiber
1: 900 µm Loose Tube

5 Select Connector*
A: None
L: LC/PC
P: FC/PC
Q: FC/APC
S: SC/PC
T: SC/APC
U: MU/PC

6 Select Customization
000: Running number used for special types or custom made

These part numbers are specific to Corning Optical Communications OEM Solutions Business Unit. Please contact OEM sales at +1-408-736-6900 or oemsales@corning.com and visit www.corning.com/opcomm/oem for sales support.