

# High-Power Optical Isolator

CORNING

## Features and Benefits

Ultra-Low PDL and PMD

High Power Handling

High Isolation

Low Insertion Loss

Wide Optical Wavelength and Temperature Range

Corning offers single-stage and dual-stage high-power optical isolators which minimize back reflection and back scattering in the reverse direction at any state of polarization. The Polarization Insensitive Isolator (PII) is a low-cost model with excellent performance, including low insertion loss, high isolation, high return loss, and low PDL and PMD. This device is specially designed to work in extremely high optical power situations up to two watts, which enables high-power operation.

## 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



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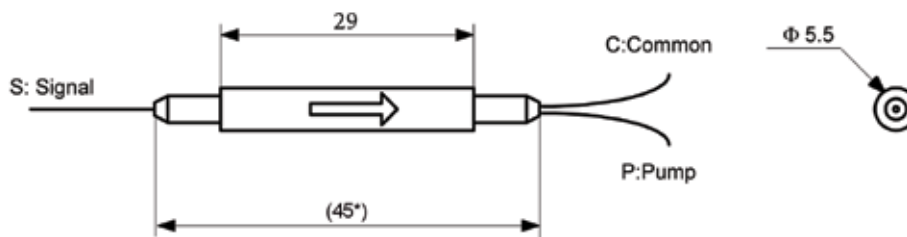
## Specifications – High-Power Optical Isolator

Parameters	Single-Stage		
	Ultra	Premium	Standard
Center Wavelength ( $\lambda_c$ )	1310, 1550, or 1590 nm		
Isolation ( $\lambda_c \pm 15$ nm, 23°C, All SOP), Minimum	30 dB	30 dB	30 dB
Isolation ( $\lambda_c \pm 15$ nm, 0-70°C, All SOP), Minimum	21 dB	21 dB	20 dB
Insertion Loss ( $\lambda_c$ , 23°C, All SOP), Typical	0.30 dB	0.35 dB	0.40 dB
Insertion Loss ( $\lambda_c \pm 20$ nm, 0-70°C, All SOP), Maximum	0.40 dB	0.50 dB	0.60 dB
PDL, Maximum	0.05 dB	0.05 dB	0.10 dB
PMD, Maximum	0.30 ps	0.30 ps	0.30 ps
Return Loss (Input/Output), Minimum	60/60 dB		
Power Handling, Maximum	200 mW		
Operating Temperature	0°C to +70°C		
Storage Temperature	-40°C to +85°C		

Shipping Package		
Packaging Dimensions	Fiber Type	Pigtail Length
( $\Phi$ ) 5.5 mm x (L) 45* mm Including boots	Corning® MF-28e®	1 m (Standard)

**Note:**

\*250  $\mu$ m bare fiber; our 900  $\mu$ m buffer solution is at 49 mm length



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## Specifications – High-Power Optical Isolator

Parameters	Single-Stage PMD Compensated			Dual-Stage PMD Compensated		
	Ultra	Premium	Standard	Ultra	Premium	Standard
Center Wavelength ( $\lambda_c$ )	1310, 1550, 1590 nm			1310, 1550, 1590 nm		
Peak Isolation, Minimum	-	-	-	60 dB	58 dB	55 dB
Isolation ( $\lambda_c \pm 15$ nm, 23°C, All SOP), Minimum	30 dB			55 dB	-	-
Isolation ( $\lambda_c \pm 15$ nm, 0-70°C, All SOP), Minimum	21 dB	21 dB	20 dB	42 dB	38 dB	34 dB
Insertion Loss ( $\lambda_c$ , 23°C, All SOP), Typical	0.30 dB	0.35 dB	0.40 dB	0.40 dB	0.40 dB	0.60 dB
Insertion Loss ( $\lambda_c \pm 20$ nm, 0-70°C, All SOP), Maximum	0.50 dB	0.50 dB	0.60 dB	0.55 dB	0.55 dB	0.70 dB
PDL, Maximum	0.05 dB	0.05 dB	0.10 dB	0.05 dB	0.05 dB	0.10 dB
PMD, Maximum	0.03 ps	0.05 ps	0.05 ps	0.05 ps	0.05 ps	0.07 ps
Return Loss (Input/Output), Minimum	60/60 dB	60/60 dB	60/55 dB	60/60 dB	60/55 dB	60/55 dB
Power Handling, Maximum	2000 mW			2000 mW		
Operating Temperature	0°C to +70°C			0°C to +70°C		
Storage Temperature	-40°C to +85°C			-40°C to +85°C		

## Ordering Information

### High-Power Optical Isolator

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- 1 Select Type**  
 1: Single-Stage  
 2: PMD Compensated Single-Stage  
 3: PMD Compensated Dual-Stage

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

- 3 Select Grade**  
 1: Standard  
 2: Premium  
 3: Ultra
- 4 Select Fiber Type**  
 0: 250  $\mu$ m Bare Fiber  
 1: 900  $\mu$ m Loose Tube  
 2: 900  $\mu$ m Tight Fiber

- 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 [oesales@corning.com](mailto:oesales@corning.com) and visit [www.corning.com/opcomm/oem](http://www.corning.com/opcomm/oem) for sales support.**



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Spec Sheet CAH-141\_AEN  
 Page 3 | Revision date 2016-12-13

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