



## 1053nm TGG Based High Power Optical Circulator

### Key Features

- Low Insertion Loss
- High Power Handling
- High Isolation
- PM and Non-PM are available
- Fiber can be customized
- High Reliability
- Excellent Temperature Stability

The TGG Based Optical Circulator is a high-performance light-wave component that routes incoming signals from Port 1 to Port 2, and incoming Port 2 signals to Port 3. They're characterized with low insertion loss, high isolation, high power handling, high return loss, low PDL, low PMD, excellent environmental stability and reliability. They are ideal for fiber laser and instrumentation applications.

If you do not see a standard circulator that meets your needs, we welcome the opportunity to review your desired specification and quote a custom circulator. Requests for custom fiber pigtails, different wavelengths and handling power of operation or other specific needs will be readily addressed.

### Applications

- High Power Fiber Lasers
- High Power Fiber Amplifier
- Pump Laser Source
- Test and Measurement
- Instrumentation



## For more Info

### Please contact us at:

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E-mail: [sales@dkphotonics.com](mailto:sales@dkphotonics.com)

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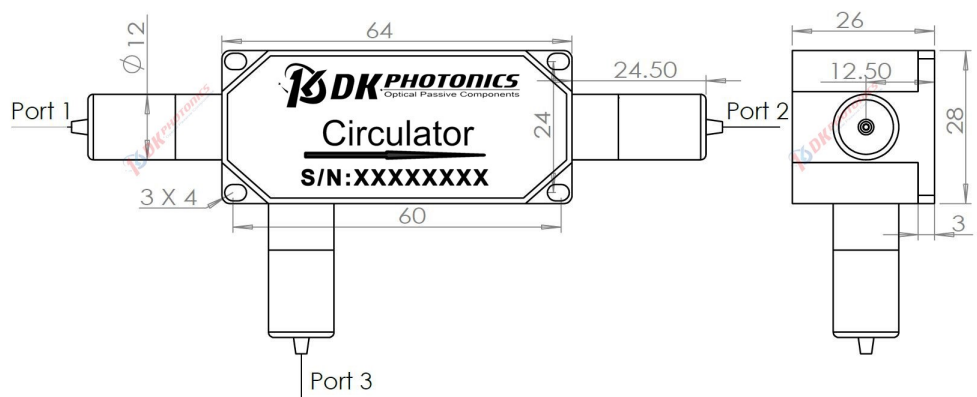
Add.:

4F, Bldg. 18, Qinghu Industrial Park,

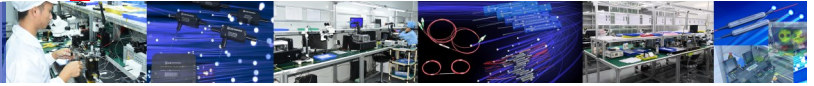
Dahe Road, Longhua Dis.,

Shenzhen, China 518109

### Package Dimension



\*Due to ongoing design improvements, the package size is subject to change. Please contact DK Photonics for confirmation if you have special requirements.



## 1053nm TGG Based High Power Optical Circulator

### Performance Specifications

Parameters	Unit	Values
Operation Wavelength	nm	1053
Operating Wavelength Range	nm	±10
Typ. Peak Isolation	dB	30
Min. Isolation, λc, 23 °C	dB	25
Typ. Insertion Loss, 23 °C	dB	0.8
Max. Insertion Loss, 23	dB	1.2
Max. PDL (for SM fiber)	dB	0.15
Min. Extinction Ratio (for PM fiber)	dB	18(Type B), 20(Type F)
Min. Crosstalk (Port 1->Port 3)	dB	45 (Typ. 50)
Min. Return Loss	dB	45
Power Handling (total pass)	W	10, 20,30
Max. Peak Power for ns Pulse	kW	10, 20 (for typical pulse application)
Max. Tensile Load	N	5
Fiber Type	-	1060-XP, PM980-XP fiber, PM1060L, 10/125DC, 20/130DC, 25/250DC, PM or Not-PM, or other
Operating Temperature	°C	0 ~ +60
Storage Temperature	°C	-10 ~ +75

1. Above specification are for device without connector, and may change without notice.
2. IL is 0.3 dB higher and RL is 5 dB lower, ER is 2dB lower (PM type) for each connector added.
3. The pass optical power is 2 W only for connector added, the connector is only used for performance testing at low power, higher power requires splicing fibers.
4. Type B: Both axis working, Type F: Fast axis blocked, the default is Type B if without request (Only for PM type)
5. If there is pulse application, please be sure to inform us of pulse energy and peak power.

### Order information P/N: HPPIOC (HPPMOC)-①-②-③-④-⑤-⑥-⑦ PMOC-B/F: PM fiber Optical Circulator

When you inquire, please provide the correct P/N number according to our ordering information, and attach the appropriate description would be better. If need any connector, we do not recommend choosing bare fiber pigtail. For high power applications, we recommend direct splicing without connectors.

①	②	③	④	⑤	⑥	⑦
Port	Operating Wavelength	Power Handling	Fiber Type	Pigtail Diameter	Fiber Length	Connector
3:3-port	53:1053nm	10:10W	XXX: fiber code	25:250μm bare fiber	05:0.5m	00: None
	64:1064nm	20:20W		90:900μm Loose fiber	10:1.0m	FP: FC/PC
		30:30W		XX: Others	15:1.5m	FA: FC/APC
				XX: Others	XX: Others	XX: Others

**Part Number Example:** HPPIOC-3-53-20-25/250/06D-25-10-00

**Description:** 1053nm 3-port High Power Polarization Insensitive Optical Circulator, 20W power handling, 25/250um, NA0.065/0.46 DC fiber, with bare fiber, 1.0m length fiber pigtails, without connectors.

### Ordering Information for Custom Parts

If you need to customize other specifications, please provide detailed description for your requirement.