

法拉第旋光器 Faraday Rotator

法拉第旋光器利用磁光材料的非互易性,即它可以将同一波长的正向入射光及反向入射光的偏振面都向同一个方向旋转同一个角度,而与光束传播方向无关。如果将一个入射光束的偏振面旋转45度的法拉第旋光器置于一对彼此呈45度正交放置的偏振器之间,构成光隔离器,它只允许正向传输的光束通过该系统,而将反向传输的光束阻断。

Faraday rotator makes use of the non-reciprocity of magneto-optic materials, that is, it can rotate the polarization surface of the forward and reverse incident light of the same wavelength in the same direction at the same angle, independent of the direction of beam propagation. if a faraday rotator rotating 45 degrees of the polarization surface of an incident beam is placed between a pair of polarizers placed in a 45 degree orthogonal position to each other to form a light isolator, it only allows the forward transmitted beam to pass through the system and blocks the reverse transmitted beam.



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自由空间隔离器 Free Space Isolator

光隔离器是允许光向一个方向通过而阻止向相反方向通过的无源器件,作用是对光的方向进行限制,使光只能单方向传输,通过光纤回波反射的光能够被光隔离器很好的隔离,提高光波传输效率。自由空间型隔离器可分为偏振相关型和偏振无关型两大类。

Optical isolator is a passive device that allows light to pass in one direction and prevents it from passing in the opposite direction. Its function is to limit the direction of light, so that light can only be transmitted in one direction, and the light reflected through the fiber echo can be well isolated by the optical isolator and improve the efficiency of light wave transmission. The free space type isolator can be divided into two categories: polarization dependent type and polarization independent type.



自由空间隔离器Isolator

规格参数Specification:

科瑞思创自己研发的磁光晶体TGG,TSAG具有高消光比、低吸收、低损耗等特点,应用于光隔离器上实现可靠隔离,性能稳定。

Crystro's own magneto-optic crystal TGG,TSAG has the characteristics of high extinction ratio, low absorption, low loss, etc. It is used in optical isolator to achieve reliable isolation and stable performance.

磁光晶体Material	TGG 或TSAG
中心波长Center Wavelength	405-1200nm
波长范围 Operating Wavelength Range	±15nm
峰值传输 Peak Transmission	> 93%
峰值隔离 Peak Isolation	> 35dB
M2降解 M2 Degradation	< 10%
通光孔径 Clear Aperture	2~20mm 或其他定制
平均光功率 Optical Power(Average)	10,30,50,100W 或指定
损伤阈值 Damage Threshold	10J/cm ² @10ns
储存温度范围 Storage Temperature	-20-70°C
可调温度范围 Tunable Temperature	10-30°C

主要特征:

- ◆ 高高隔离度
- ◆ 低插入损耗
- ◆ 高可靠性和高稳定性
- ◆ 极低的偏振相关损耗和偏振模色散

Features:

- ◆ high isolation
- ◆ low insertion loss
- ◆ high reliability and stability
- ◆ extremely low polarization correlation loss and polarization mode dispersion