

MarkeTech Rutile (TiO₂) Fiber Optic Crystal

Category : Ceramic , Oxide , Titanium Oxide

Material Notes:

More chemically and physically resistant than Yttrium Vanadate. Large birefringence. Used for fiber optic beam displacers and optical isolators. Grown by Vernull method. Transmission range 500 to 4500 nm. Data provided by the supplier, MarkeTech International.

Order this product through the following link:

http://www.lookpolymers.com/polymer_MarkeTech-Rutile-TiO2-Fiber-Optic-Crystal.php

| Physical Properties | Metric | English | Comments |
|---------------------|-------------|--------------------------|----------|
| Density | 4.26 g/cc | 0.154 lb/in ³ | |
| a Lattice Constant | 4.5936 Å... | 4.5936 Å... | |
| c Lattice Constant | 2.9852 Å... | 2.9852 Å... | |

| Mechanical Properties | Metric | English | Comments |
|-----------------------|--------|---------|----------|
| Hardness, Mohs | 7.0 | 7.0 | |

| Thermal Properties | Metric | English | Comments |
|----------------------|----------------|-------------------------------------|-------------|
| CTE, linear | 7.14 Åµm/m-Å°C | 3.97 Åµin/in-Å°F | a direction |
| | 9.19 Åµm/m-Å°C | 5.11 Åµin/in-Å°F | c direction |
| Thermal Conductivity | 9.00 W/m-K | 62.5 BTU-in/hr-ft ² -Å°F | a direction |
| | 13.0 W/m-K | 90.2 BTU-in/hr-ft ² -Å°F | c direction |
| Melting Point | 1840 Å°C | 3340 Å°F | |
| Debye Temperature | 487 Å°C | 909 Å°F | |

| Optical Properties | Metric | English | Comments |
|--------------------|--------|---------|---------------------|
| Refractive Index | 2.47 | 2.47 | η _o |
| | 2.73 | 2.73 | η _e |

| Electrical Properties | Metric | English | Comments |
|-----------------------|-----------------------|-----------------------|----------|
| Dielectric Constant | 160 | 160 | |
| | @Frequency 1.00e+7 Hz | @Frequency 1.00e+7 Hz | |

| Electrical Properties | ²⁰⁰ Metric | ²⁰⁰ English | Comments |
|-----------------------|--------------------------|---------------------------|----------|
| | @Frequency 10000 Hz | @Frequency 10000 Hz | |
| Band Gap | 3.3 eV | 3.3 eV | |

| Descriptive Properties | Value | Comments |
|------------------------|------------|----------|
| Crystal Structure | Tetragonal | |

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China