

# YIG ( $\text{Y}_3\text{Fe}_5\text{O}_{12}$ )

In the latest *Global YIG Magnet-Optical Material Market* report, Carlit is listed among the key global suppliers.

## Product

### - Isolator Material for Near-infrared and Mid-infrared

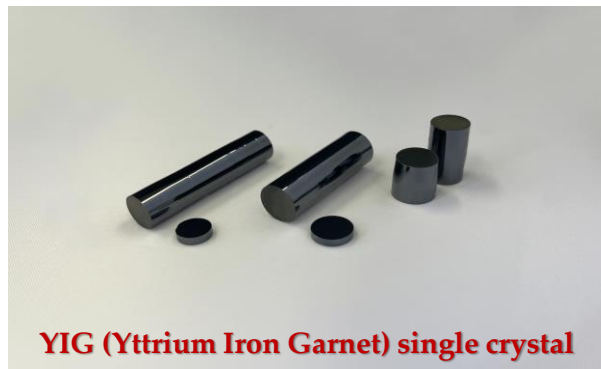
YIG single crystals exhibit high transmittance from 1,200 nm to 4,550nm, making them extremely useful as optical devices.

### - High purity single crystal by FZ method

Grown by the FZ method, which can be high-quality single crystal growth possible, because no impurities are introduced during growing process.

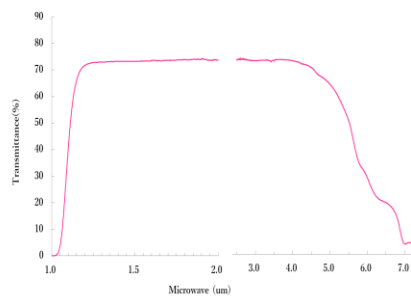
### - Substitutional Rare-earth Iron Garnet for various magneto-optical device

By controlling the saturation magnetization through substitutional single crystal YIG, it can be utilized in various magneto-optical device.

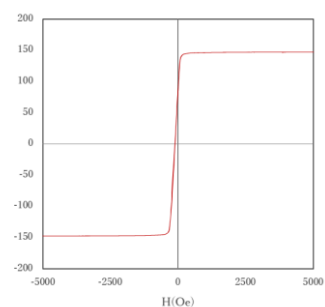


## Properties

- Crystal Structure : Cubic
- Lattice Constant : 1.24 nm
- Density : 5.17 g/cm<sup>3</sup>
- Melting Point : 1555 °C
- Transmittance : Bulk / Uncoated
- Saturation Magnetization: 300-1780Gauss
- Crystal defect : Crack free, Void free



UV-Vis/FT-IR Spectrum Analysis of YIG  
Sample : thickness 2mm, Double side polish, uncoated.  
※The above is for reference only.



Magnetization cycle of YIG at RT  
Sample : thickness 1mm, As-cut wafer  
※The above is for reference only.

## Specification

- Orientation: <111> (Customizable)
- Diameter : ~ 6 mm (Customizable)
- Length : ~ 100 mm
- Thickness : 0.125 ~ 2.0 mm (Customizable)
- Surface : Single Side Polish, Double Side Polish, As cut, Lapped



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