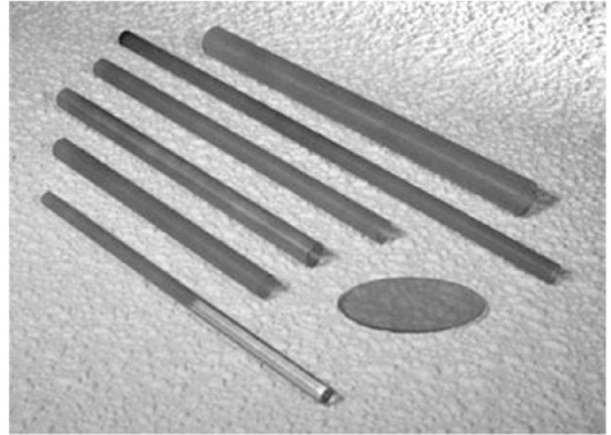


**Er:YAG (2940nm)**

(Erbium doped Yttrium Aluminum Garnet)

**Advantages**

- Wide pump band of 600 - 800 nm
- High optical quality
- Operates in a long-wavelength, high water peak region
- Ideal for hard tissue removal

**Specifications**

<b>%Er Concentration</b>	50%
<b>Wavefront Distortion (per inch of rod length)</b>	$\lambda / 2$
<b>End Face Parallelism</b>	<30 arc seconds
<b>Available Rod Lengths</b>	3mm - 152.4mm
<b>Available Rod Diameters</b>	2mm - 9.525mm

**Material Properties**

<b>Formula</b>	$\text{Er}^{3+}:\text{Y}_3\text{Al}_5\text{O}_{12}$
<b>Crystal Orientation</b>	Cube[111]
<b>Density</b>	5.51 g/cm <sup>3</sup>
<b>Stimulated Emission Cross Section</b>	$3 \times 10^{-20} \text{cm}^2$
<b>Fluorescence Lifetime</b>	90 $\mu\text{s}$

**Dimensional / Mechanical Specifications**

Parameter	Tolerance
<b>Diameter</b>	+0.000" / -0.002"
<b>Length</b>	+0.040" / -0.000"
<b>End Figure</b>	$\lambda / 10$ wave @ 633 nm
<b>Parallelism</b>	<30 arc seconds
<b>Perpendicularity</b>	within 5 arc minutes
<b>Surface Quality</b>	10 - 5 scratch-dig
<b>Chamfer</b>	0.005" $\pm$ 0.003" @ 45° $\pm$ 5°
<b>Barrel Finish</b>	55 $\pm$ 5 $\mu\text{inche}$

