

Thermal Inertia Index for Gemstones © Kirk Feral 2017

Referenced to the SmartPro Gem-Eye 1 Meter

<u>Gem</u>	<u>TI Range</u>
<i>Amber</i>	< 0.5
<i>Plastic</i>	0.5-1
<i>Low Zircon</i>	1-3
<i>Glass</i>	1-3
<i>Opal</i>	2-3
<i>Pollucite</i>	2-3
<i>Cerussite</i>	3
<i>Turquoise</i>	3-4
<i>Scapolite</i>	3-4
<i>Barite</i>	3-4
<i>Chrysocolla</i>	3-5
<i>Pearl</i>	3-5
<i>Triplite</i>	4
<i>Apatite</i>	4-5
<i>Feldspar</i>	4-5
<i>Cubic Zirconia</i>	4-8
<i>Prehnite</i>	5-7
<i>Larimar</i>	5-7
<i>Bastnasite</i>	5-7
<i>Smithsonite</i>	5-8
<i>Hydrogrossular Garnet</i>	5-9
<i>Chalcedony</i>	5-12
<i>Iolite</i>	6
<i>Variscite</i>	6-7
<i>Tanzanite/Zoisite</i>	6-9
<i>Idocrase</i>	6-9
<i>Scheelite</i>	7-9

<i>Pyrope Garnet</i>	7-10
<i>Lapis Lazuli</i>	7-11
<i>Sodalite</i>	8-9
<i>Nephrite</i>	8-9
<i>Sphene</i>	8-9
<i>Petalite</i>	8-9
<i>Enstatite</i>	8-10
<i>Almandine Garnet</i>	8-10
<i>Maw Sit Sit</i>	8-10
<i>Serpentine</i>	8-11
<i>Rhodochrosite</i>	8-11
<i>Tourmaline</i>	8-13
<i>Beryl</i>	8-14
<i>Kornerupine</i>	9-11
<i>Axinite (Fe, Mn, Mg)</i>	9-12
<i>Diopside</i>	9-14
<i>GGG</i>	9-15
<i>Intermediate Zircon</i>	9-25
<i>Cuprite</i>	10
<i>Spessartine Garnet</i>	10-12
<i>Spodumene</i>	10-14
<i>Calcite</i>	11
<i>Peridot</i>	11-12
<i>Andradite Garnet</i>	12-19
<i>Cuprite</i>	13
<i>Clinohumite</i>	13-15
<i>Jadeite</i>	13-16
<i>Sapphirine</i>	13-17
<i>Danburite</i>	13-18
<i>Grossular Garnet</i>	13-18
<i>Uvarovite Garnet</i>	13-18

<i>Quartz</i>	13-20
<i>Andalusite</i>	13-23
<i>YAG</i>	14-22
<i>Fluorite</i>	15-23
<i>Sinhalite</i>	18-23
<i>Hemetine (man-made)</i>	19-23
<i>Flame fusion Spinel</i>	20-28
<i>Sillimanite</i>	21-30
<i>Spinel</i>	21-40
<i>Sphalerite</i>	24-25
<i>Kyanite</i>	25-33
<i>High Zircon</i>	25-35
<i>Topaz</i>	25-42
<i>Euclase</i>	26-28
<i>Chrysoberyl</i>	27-35
<i>Diaspore</i>	29-36
<i>Hematite</i>	34-35
<i>Corundum</i>	35-54
<i>Cassiterite</i>	42-43
<i>Zincite</i>	42-53
<i>Phenakite</i>	48-52
<i>Moissanite</i>	> 70
<i>Diamond</i>	> 70

Helpful Look-alike Separations:

Rubies <35 are glass-filled

CZ & YAG & Zircon

Green YAG & green metamict Zircon

Cassiterite & Cerrussite

Nephrite & Jadeite

Hematite & Hemetine

Feldspar & Quartz

Feldspar & Beryl

Scapolite & Quartz

Sphene & Sphalerite

Glass/Garnet Doublets

Red Garnet & Ruby & Red Spinel & Red Zircon

Triplite & Spessartine