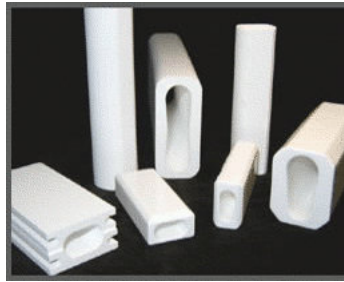


Custom Products and Services

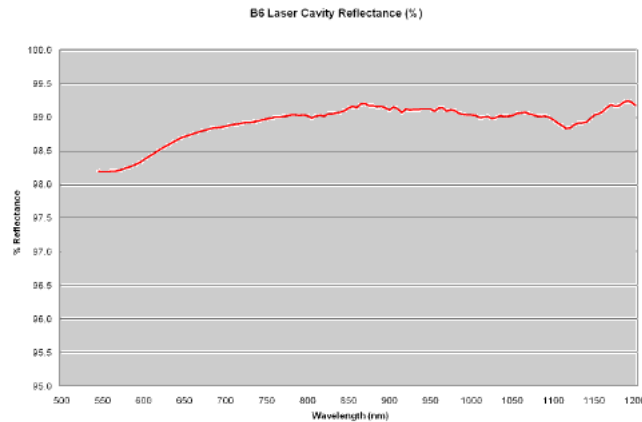
[Accuflect® Components](#)[>Laser Reflectors](#)[>IPL Reflectors](#)[>Solar Cell Mfg.](#)[>Luminaires](#)[>Thermophotovoltaics](#)[Fiber Optic Preforms](#)[Laser Ceramics](#)[Microwave Components](#)[Metal Fabrication](#)[Scientific Instrumentation](#)[Precision Fabrication](#)[Application Consulting](#)

Accuflect® Laser Reflectors

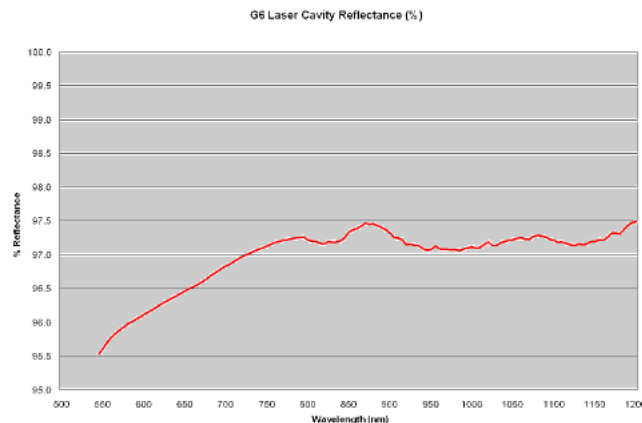
Accuflect® ceramic laser reflectors are high efficiency diffuse reflectors. The nearly perfectly diffuse reflection and high reflection efficiency are effectively exploited in laser systems with laser hosts having pump bands in the 500 nm to 1200 nm spectral range.



Two grades of Accuflect® light reflecting ceramic are available for laser reflectors. Accuflect® B6 has a native ceramic surface. It is approximately 30% porous and exhibits nearly perfect lambertian reflectance and virtually no absorption losses. It is suited for dry cavity laser applications such as low energy air cooled systems or higher energy laser systems where the reflector is isolated from liquid coolants with o-ring sealed flow tubes. The curve shown below illustrates the total reflectance of Accuflect® B6.



Accuflect® G6 has a glazed surface. It is impervious to coolants and the contaminants that may be circulating with them. It is well suited for use in compact, high energy flooded cavity laser heads. The curve below illustrates the total reflectance of Accuflect® G6. With an air interface, Accuflect® G6 has approximately 4% specular reflectance when measured 8° from normal. The specular component is mitigated in flooded cavities due to the better refractive index match between the coolant and the glazed surface interface.



Accuflect® laser reflectors reduce and eliminate many of the shortcomings of PTFE polymer reflectors, polished metal specular reflectors and packed powder

diffuse reflectors with a number of desirable characteristics:

- Highly efficient reflection eliminates need for high accuracy focusing reflectors
- Highly uniform light field within the cavity results in a more uniform output beam profile
- Diffuse light eliminates the hot spots in the laser host of specular cavities reducing Amplified Spontaneous Emission (ASE)
- Ceramic material is strong and tough, able to resist breakage if a flashlamp explodes
- Glazed surfaces are corrosion resistant, allowing direct contact with coolants. Flooded cavities are easily implemented so laser heads are simple, compact and lower cost.
- Accuflect® is dimensionally stable. It will not cold flow like polymers.
- Accuflect® is not susceptible to localized catastrophic damage from surface contaminants absorbing radiation.
- Lower cost ground or grooved laser crystals can be used in diffuse cavities.
- Ground or grooved laser crystals reduce potential for parasitic oscillations.
- There is no plating to flake off like specular metal reflectors.

See Also:

General Information

[Accuflect® Light Reflector](#)

[Accuflect® Infrared Reflector](#)

Other Custom Accuflect Products

[Intense Pulsed Light Reflectors](#)

[Solar Cell Furnace Reflectors](#)

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[Thermophotovoltaic Reflectors](#)

Design Notes

[Accuflect® Ceramic Laser Cavity Design](#)

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[Reflection Properties of Accuflect® Light Reflecting Ceramic](#)

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