Abrisa Technologies Hot Mirrors are Ideal for Heat Control Applications

Santa Paula, CA – The ZC&R Coatings for Optics (ZC&R) division of Abrisa Technologies can supply hot mirrors or short wave pass filters (SWP) for heat control applications. For hot mirrors, a thin film coating is applied to a glass substrate, such as soda-lime or borosilicate, in order to reflect infrared radiation either as a means to harness the reflected wavelengths for an application or remove them from an application. Simplified, a hot mirror will separate visible light from heat. ZC&R typically provides hot mirrors in thicknesses of 1.1 mm, 1.75 mm, and 3.3 mm and in diameters up to 24”. Custom sizes and thicknesses are available upon request.

Typical features of hot mirrors include:

- High transmission for the visible light range
- High reflection of infrared
- Utilize high quality borosilicate glass substrates – SCHOTT Borofloat®
- Thin film dielectric multi-layer coating
- Standard angles of incidence are 0 and 45 degrees

Hot Mirrors Provided by ZC&R Include:

- **HM-VS-950 Hot Mirror** – transmits the visible spectrum and reflects much of the infrared out to 950 nm
- **HM-VS-1150 Hot Mirror Filter** – transmits the visible spectrum and reflects much of the infrared out to 1150 nm
- **HM-VS-1500 Hot Mirror** – extreme performance hot mirror offers enhanced UV blocking
- **HM-VS-1600 Hot Mirror Filter** – extended hot mirror blocking infrared out to 1600 nm
- **HM-VS-1900 Hot Mirror Filter** – affordable and reliable, transmits the visible spectrum with moderate infrared attenuation
- **HM-VS-3000 Filter** – combines reflectance and absorptance to block a very wide band in the infrared while maintaining good visible transmittance
- **HM-UV-1050 UV Pass Hot Mirror** – designed to transmit more than 80% on average from 245 to 460 nm and reflect more than 70% on average from 800-1050 nm

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Hot Mirrors for Heat Control

Standard hot mirror provided by ZC&R/Abrisa Technologies, have been designed to be used in optical systems at angles of incidence varying between 0 and 45 degrees. They are utilized in applications where heat build-up would damage components or adversely affect spectral characteristics of the illumination source.

Typical Applications for ZC&R Hot mirrors include:

• LCD displays
• Entertainment & architectural spot lighting
• Fiber optic lighting
• Medical
• Heat/light separation applications
• Aerospace & defense
• Digital photography

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