PRESSED GLASS CONDENSING REFLECTORS

GENERAL ELECTRIC COMPANY
LAMP COMPONENTS DIVISION
PRODUCT DATA SHEET 7620-a
Effective AUGUST 1, 1979
(Replaces 7620, 6-15-78)

DESCRIPTION

General Electric manufactures a large variety of round and oblong-round condensing reflectors from heat-resistant borosilicate glass. These reflectors are mass-produced at high speed, with remarkable precision, using glass pressing techniques developed through many years experience.

GE borosilicate reflectors offer many advantages. They have good thermal shock resistance, and with the proper coating applied, they have the ability to transmit infrared while reflecting visible light.

AVAILABILITY

A substantial number of stock reflectors are offered in round and oblong-round shapes, from 1¾ inch to 3 inch diameters, including reflectors with smooth surfaces and ones with stippled surfaces. Certain reflectors are available with Kovar pins inserted during manufacture, or with post-forming operations to create flat sides.

In addition to stock reflector designs, General Electric's glass pressing techniques and tooling design capability can be applied to produce custom-made parts as small as 1½ inch and as large as several inches in diameter, to individual customer designs having precise optical figure and specular surface.

APPLICATIONS

General Electric borosilicate condensing reflectors are well-suited for a number of lamp applications where a condensing reflector can replace a condensing lens. These include medical, recreation, and advertising applications as well as such photo applications as film, movie, and microfilm projectors.

TYPICAL PROPERTIES OF 776 BOROSILICATE GLASS

Color	Clear
Density (g/cc)	2.23
Young's Modulus (10^6 psi)	9
Thermal Expansion (10^{-7} cm/cm/C) 0-300 C	33
Viscosity	
Strain Point	485 C
Anneal Point	535 C
Softening Point	785 C
Electrical Resistivity (Log_{10} Ohm-cm)	
250 C	8.5
300 C	7.7
350 C	7.0
Dielectric Constant (at 1MHz and 20 C)	4.5
Loss Tangent (at 1MHz and 20 C)	.002
Loss Factor (at 1MHz and 20 C)	.008
Refractive Index n_d (values at 5893 Angstroms)	1.471
Dispersion (at N_f - N_c)	.0073
Useful Transmittance (exceeds 10%) (Microns)	30 - 3.5

TECHNICAL ASSISTANCE

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ORDERING

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STYLES AVAILABLE

MR-14D3
Oblong-round pressed shape
2 pins, horizontal bosses

MR-14G1
Round, round hole

MR-15A3
Oblong-round, sawed,
2 pins, horizontal bosses

MR-15B1
Oblong-round, sawed,
2 pins, vertical bosses

MR-16C3
Round, rectangular base
MR-16D3
Round, rectangular base
MR-16E1
Round, rectangular base,
stippled surface

MR-16F1
Round, round hole

MR-18A1
Oblong-round

MR-24A3
Oblong-round, pockets

MR-24B1
Round

Lamp Components Division is the source for tungsten, molybdenum, glass, fused quartz, Lucalox®, phosphors, chemicals, Dumet and Cumet Wire, leads, bases and other components used by the lamp, electronic and cemented carbide industries. Technical and engineering assistance is available on all products. For information contact:

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