

CONTRAST SENSITIVITY GAGES

ASTM E 1647

Used in conjunction with a high contrast resolution measuring gage such as a *DUPLEX WIRE IMAGE QUALITY INDICATOR (EN 462 PART 5)*; Contrast sensitivity gages measure contrast sensitivity independent of the imaging system spatial resolution limitations.

Contrast sensitivity gages are manufactured with four precision thickness recesses representing the four levels of contrast sensitivity to be measured- 1, 2, 3 and 4% as shown in figure 1 below. Contrast sensitivity gages are designed with four gage sizes. As tables 1, 2, and 3 indicate, each gage size covers a range of thicknesses.

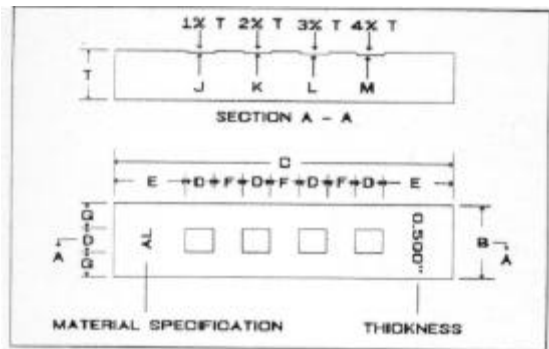


FIG. 1 General Layout of the Contrast Sensitivity Gage

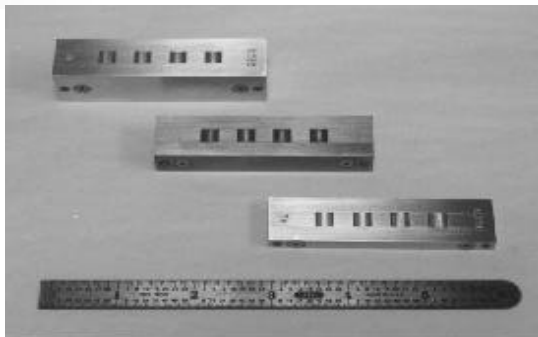


TABLE 1 Design of the Contrast Sensitivity Gage

Gage Thickness	J Recess	K Recess	L Recess	M Recess
T	1 % of T	2 % of T	3 % of T	4 % of T

TABLE 2 Contrast Sensitivity Gage Dimensions

Gage Size	B DIM.	C DIM.	D DIM.	E DIM.	F,G DIM.
1	0.750 in.	3.000 in.	0.250 in.	0.625 in.	0.250 in.
	19.05 mm	76.20 mm	6.35 mm	15.88 mm	6.35 mm
2	1.500 in.	6.000 in.	0.500 in.	1.250 in.	0.500 in.
	38.10 mm	152.40 mm	12.70 mm	31.75 mm	12.7 mm
3	2.250 in.	9.000 in.	0.750 in.	1.875 in.	0.750 in.
	57.15 mm	228.60 mm	19.05 mm	47.63 mm	19.05 mm
4	3.000 in.	12.000 in.	1.000 in.	2.500 in.	1.000 in.
	76.20 mm	304.80 mm	25.40 mm	63.50 mm	25.4 mm

TABLE 3 Contrast Sensitivity Gage Application

Gage Size	Use on Thicknesses
1	Up to 1.5 in. (38.1 mm)
2	Over 1.5 in. (38.1 mm) to 3.0 in. (76.2 mm)
3	Over 3.0 in. (76.2 mm) to 6.0 in. (152.4 mm)
4	Over 6.0 in. (152.4 mm)

Contrast sensitivity gages can be manufactured from in the following materials:

MAGNESIUM	(GROUP 03)
ALUMINUM	(GROUP 02)
TITANIUM	(GROUP 01)
STEEL OR STAINLESS STEEL (300 SERIES)	(GROUP 1)
ALUMINUM BRONZE ALLOY #623 OR #630	(GROUP 2)
NI-CR-FE (INCONEL 600)	(GROUP 3)
70 to 30 NICKEL COPPER (MONEL) or	(GROUP 4)
70 to 30 COPPER NICKEL (CU-NI)	
TIN BRONZE alloy D of B 139	(GROUP 5)