

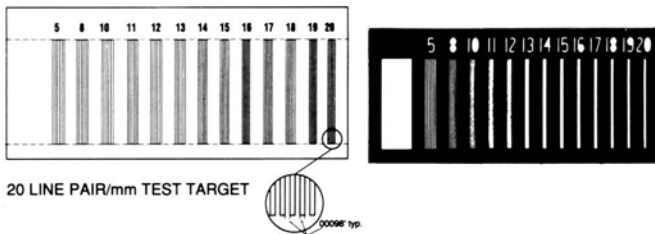
## X-Ray Test Patterns

### Star Test Patterns

Focal spot size can be determined by observing the regions of blurring which occur when the pattern is radiographed by an x-ray source of finite dimensions. Radiation from different areas of the focal spot will cause a periodic blurring of the pattern due to penumbra effects. Knowledge of the geometric factors and the distance from the center of the pattern to the region where blurring occurs will permit the calculation of the focal spot size. The star patterns listed below are handmade, ultraprecision types.



Model	07-554	07-550	07-503-1	07-542-1	07-509-1	07-510-1
Angle of a single line within a sector	0.25	0.5	0.5	1	2	2
Number and size of patterned sectors	4-15	4-45	4-15	4-28	4-45	1-360
Lead foil thickness (in mm)	0.03	0.03	0.03	0.03	0.05	0.05
Outer diameter (in mm)	55	55	55	55	55	55
Focal spot size measured (in mm)	0.05-0.2	0.1-0.3	0.1-0.3	0.3-0.6	1.0-2.0	1.0-2.0



### 07-555 Resolution X-Ray Test Pattern

Resolution X-Ray Test Pattern specifically designed for evaluation of focal spot performance protocol in Mammography. It is now being suggested that a resolution test pattern from 5-20 LP/mm be used to evaluate the condition of the focal spot. Instead of making focal spot measurements that can be ambiguous, an accurate determination of the x-ray tube's resolution ability can be measured by using this test pattern. The Model 07-555 is manufactured from 0.02 mm thick gold foil, 25 mm long and 10 mm wide. The pattern has 13 segments, from 5 LP/mm to 20 LP/mm. Radio-opaque numbers indicate the resolution (in LP/mm) of each group.

### MC-1 Pocket Optical Comparator

Ideal for checking small parts, linear measurements, hole diameters, thread sizes and slit camera images. Unlike lower-priced comparators with only a simple lens, the MC-1 incorporates a triplet lens. It provides an extremely flat field over the entire reticle area. The clear, acrylic cell allows the outside light to illuminate the subject. The comparator reticle is different from ordinary reticles in that the fine ink-filled markings are on the outside of the reticle. This is done so that the reticle scales are always in direct contact with the object and you always get optimum focus, freedom from parallax, and accurate measurements. The scale reticle is optical glass with a pigment-filled pattern, 20 mm long with 0.1 mm per division.

#### Specifications

Magnification: 6X  
 Lens: glass, Hastings Triplet  
 Eye lens diameter: 0.925 in  
 Field of view: 1 in  
 Working distance: 1.5 in  
 Height: 1.75 in  
 Weight: 43.3 g

