Penta Prisms deviate a beam by 90° without inverting or reversing the image. These prisms also have the property of constant deviation, which means that the 90° deviation angle applies to all rays transmitted by the effective aperture, regardless of their angle with respect to the optical axis.

Penta prisms are thus very useful in applications where prism orientation cannot be precisely controlled. Due to the geometry of penta prisms, the reflecting surfaces due not utilize total internal reflection and must be coated with a metal or dielectric coating.

RMI Standard Specifications

**Materials:**
- BK7
- UVFS
- FS
- CaF₂

**Surface Figure:**
All polished surfaces: λ/20 at 633 nm
BK7, UVFS, FS:
CaF₂:

**Surface Quality:**
BK7, UVFS, FS:
CaF₂:

**Dimensions:**
A=B=C

**Dimensional Tolerance:**
+ 0.000", − 0.010"

**Angular Deviation:**
≤ 3 arc minutes

**Bevels:**
0.010" – 0.030" at 45°

**Clear Aperture:**
Exceeds central 85% of diameter

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The cornerstone of the RMI service philosophy is a collaborative approach with our customers to solve even the most technically challenging requirements. Working with clients in the early stages of development, we transition prototype concepts to efficient and manufacturable solutions.

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