



Our Goal: Provide high quality optical encoders for industrial use

From linear to disk, GM Nameplate provides some of the best optical encoder solutions in the industry. Our optical encoders measure motion – such as position, velocity and acceleration - in a variety of equipment and machinery. Disk encoders measure rotation, while line encoders measure linear motion.

Encoders are constructed of film, glass or metal. Film and glass encoders are treated photographically by contact exposure of photographic film directly from chrome-on-glass or emulsion-on-film masters. Metal encoders are chemically or laser etched. (Glass is the preferred material for masters, being both dimensionally stable and clear. Because glass masters represent a significant cost, film masters are often used during prototyping. Proofs created from film verify the master prior to production.)

Encoders are fabricated with Class-A tooling and an optically controlled punch press to achieve the best tolerances and image registration. Optically punched holes serve as the center mounting holes for encoder disks and as Class-A tool registration holes. With a limit of .472" diameter, registration holes can be punched at the same diameter as the center hole. With optical targets, total indicated runout (TIR) can be held to .002". Final shape and interior holes fabricated by Class-A tools will hold tolerances of $\pm .005"$ and optically punched mounting holes $\pm .001"$.

MATERIALS

Glass:

- High resolution, high durability, costly

Film:

- High resolution, modest durability,
- inexpensive

Metal:

- Low resolution, high durability

SPECIFICATIONS

Resolution:

- 20 - 750 lines per inch (LPI)

Space width:

- .025" - .00066

IMAGE SIZE

Glass Master:

- Maximum - 19.5" x 23.5"

Film Master:

- Maximum - 24" x 82"