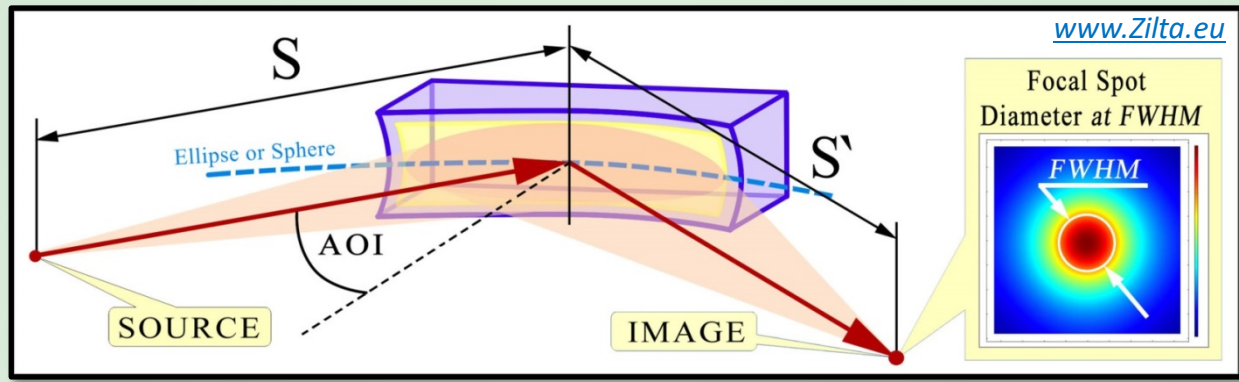


Algorithm to chose best grazing mirrors



Choose purpose of the mirror

Beam ENERGY CHANNELING
 without high-quality image
 (focal spot $\varnothing \approx 0.2-2$ millimeters)

FORMATION of high-quality IMAGES
 of the source ("point to point focusing")
 (focal spot $\varnothing \approx 1-100$ micrometer)

LOWER COST
 SPHERIC surfaces:
 toroidal, cylindrical, sphere

www.Zilta.eu

In the world typically **x2**

Our offer **x1.5**

HIGHER COST
 ASPHERIC surfaces: ellipsoids, paraboloids,
 hyperboloids and "free form"

While taking into account Your:

Size of Your vacuum chamber
(setup scheme etc.)

Desirable mirror reflectivity
for Your work spectral range

Something
other?

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You have to choose optimal combination of **FIVE PARAMETERS**

(see drawing on previous page):

Angle Of Incidence

Distance to source (S)

Clear Aperture

Distance to image (S')

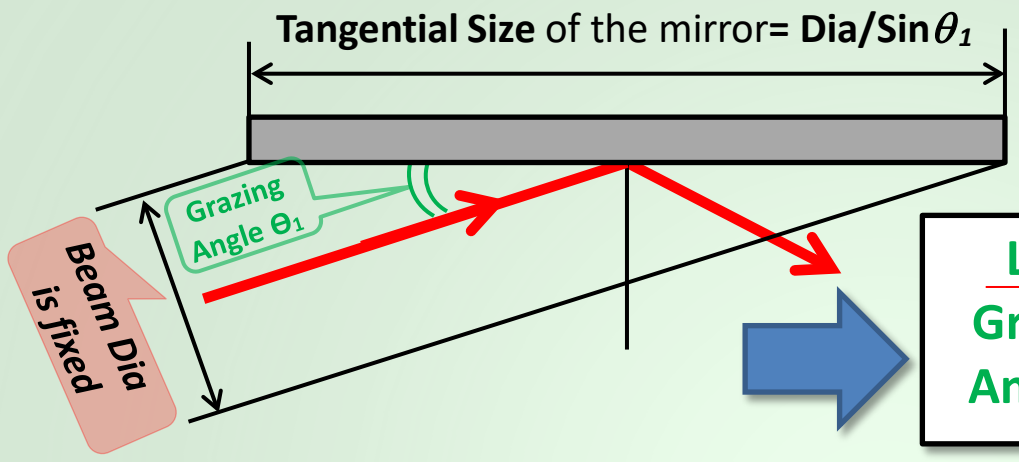
**Focal Spot
Diameter**

Afterwards **our professional engineers will calculate necessary shape & accuracy.**

Also don't forget to inform us about other parameters, which may be important:

mirror operating conditions (power, vacuum, temperature), may be mounting or work wavelength range and etc.

Grazing Angle = $90^\circ - \text{Angle Of Incidence}$



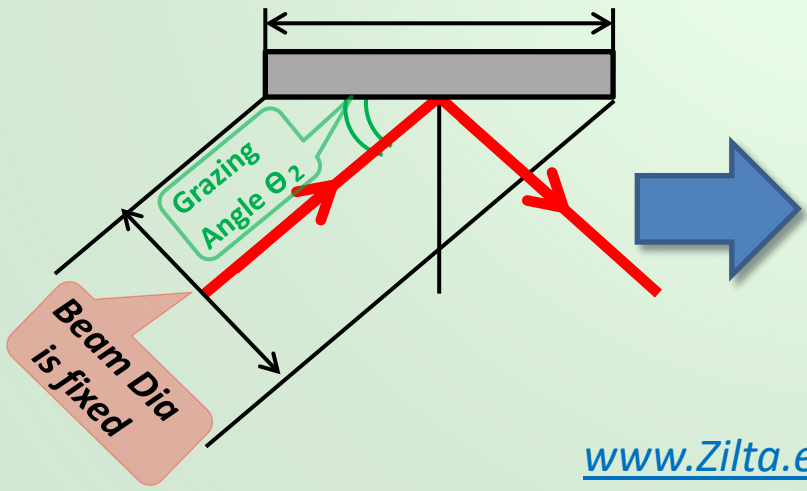
Advantages :
Higher Reflectivity
 (more details see next page)

LESS
Grazing
Angle θ

Disadvantages:
 Larger mirror sizes
 ↓
Higher cost

Grazing Angle = $90^\circ - \text{Angle Of Incidence}$

Tangential Size of the mirror = $\text{Dia}/\sin\theta_2$

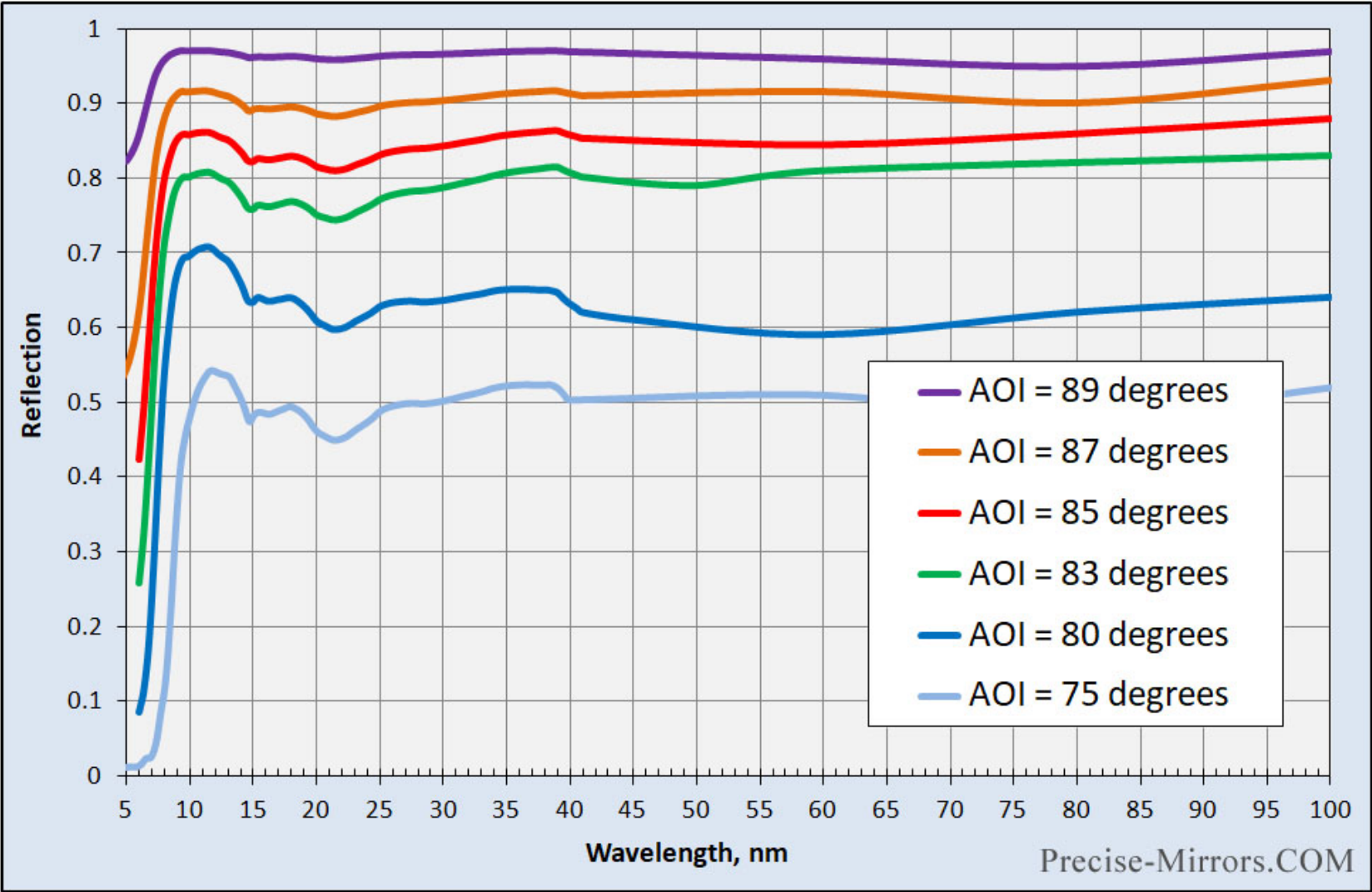


LARGER
Grazing
Angle θ

Disadvantages:
Less Reflectivity
 (more details see next page)

Advantages:
 Less mirror sizes
 ↓
Lower cost

Standard Au reflection in spectral range 5-100 nm vs Angle of incidence



Precise-Mirrors.COM