

The catalog number system

All standard gratings have a catalog number according to the following format:

AA BBB CC DD - EEE x

- The 1st and 2nd characters **AA** are numerals that indicate the type of grating (e.g., plano, concave, grism).
- The 3rd, 4th and 5th characters **BBB** are numerals that indicate the size of the grating substrate.
- The 6th and 7th characters **CC** are letters that indicate the substrate material.
- The 8th and 9th characters **DD** are numerals that indicate the type of coating (e.g., aluminium, gold).
- The 10th, 11th and 12th characters **EEE** serve to identify the groove frequency, blaze angle, and blaze wavelength (and, in the case of concave gratings, the substrate radius as well).
- The last character **x** will be either "R" for ruled gratings, "H" for holographic gratings, or "E" for echelle gratings.

The type codes **AA** are given below:

33	Diced
43	Wedged
52	Concave
53	Plano
54	Plano transmission
63	Score and Snap
65	Grism

The substrate material codes **CC** are given below:

AL	aluminum
BF	borosilicate float
BK	BK-7 glass
CU	copper
FL	float glass
FS	fused silica
PX	Corning Pyrex®
SP	special glass (unspecified)
TB	BK-7, transmission grade
TF	fused silica, transmission grade
UL	Corning ULE® glass
ZD	Schott Zerodur®

The coating material codes **DD** are given below:

01	aluminum
02	gold
03	aluminum with MgF₂
04	platinum
05	iridium
06	protected silver
07	transmission

Example **53004BK01-010R**

53	→ Plano grating
004	→ 30 x 30 x 10 mm substrate dimensions, 26 x 26 mm ruled area
BK	→ BK-7 substrate material
01	→ Aluminum coating
010	→ 600 g/mm 5.2° blaze angle
R	→ Ruled

Example **53015FS02-200H**

53	→ Plano grating
015	→ 110 x 110 x 16 mm substrate dimensions, 102 x 102 mm ruled area
FS	→ Fused silica substrate material
02	→ Gold coating
200	→ 1200 g/mm blazed at 250 nm
H	→ Holographic

Example **53028ZD06-414E**

53	→ Plano grating
028	→ 165 x 220 x 35 mm substrate dimensions, 154 x 206 mm ruled area
ZD	→ Schott Zerodur® substrate material
06	→ Protected silver
414	→ 31.6 g/mm, 76° blaze angle
E	→ Echelle

Example **52027BK03-010H**

52	→ Concave grating
027	→ 32 x 32 mm substrate dimensions, 30 x 30 ruled area
BK	→ BK-7 substrate material
03	→ Aluminium with MgF ₂
010	→ 1200g/mm, constant-deviation grating, blazed at 250nm
H	→ Holographic

Custom coatings and substrates available upon request.

Organization of the product listings

Gratings are listed in the Catalog in thirteen (13) tables:

- Table 1** Plane Ruled Reflection Gratings
- Table 2** Plane Holographic Reflection Gratings
- Table 3** Ruled Concave Reflection Gratings
- Table 4** Echelle Reflection Gratings
- Table 5** Large Astronomical Reflection Gratings
- Table 6** Plane Transmission Gratings – Visible Spectrum
- Table 7** Plane Transmission Gratings – Ultraviolet Spectrum
- Table 8** Diode & Dye-laser Tuning Gratings
- Table 9** Molecular Laser Tuning Gratings
- Table 10** Concave Holographic Aberration-Reduced Reflection Gratings
- Table 11** Pulse Compression Gratings
- Table 12** Telecommunications Gratings
- Table 13** UV/Vis Gratings

Within each table, gratings are organized as follows:

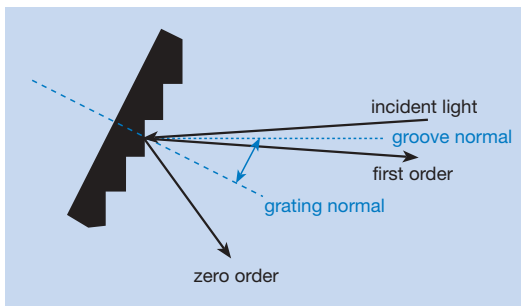
- Plane gratings are listed in order of groove frequency, with the lowest blaze angle listed first.
- Ruled concave gratings are listed in order of substrate radius, with the lowest blaze wavelength listed first.
- Concave holographic gratings are listed in order of groove frequency.

In all cases except for concave holographic gratings, blaze wavelengths listed are for the first-order Littrow configuration. (The Littrow configuration is that in which the grating diffracts light back along the incident beam.)

Catalog Number	Grooves per mm	Nominal Blaze Wavelength 1st Order (Littrow)	Nominal Blaze Angle	Maximum* Ruled Area (HxW, mm)
53-*-006	5880	138 nm	24.0°	30 x 45
53-*-911	4968	131 nm	19.0°	90 x 140

Catalog Number	Concave Radius (mm)	Grooves per mm	Nom First (Littrow) Blaz
52-04-*-440 (T)	115.0	600	427
52-02-*-410	390.0	600	180

Catalog Number	Grooves per mm	Substrate Radius (mm)	Imaging Range $m\lambda_1, m\lambda_2$ (nm)	RLD (nm/mm)
82-22-*-028H	200	152.4	290-1020	32.3
82-18-*-018H	233.9	131.53	190-400	33.0



Grating used in first order near Littrow.