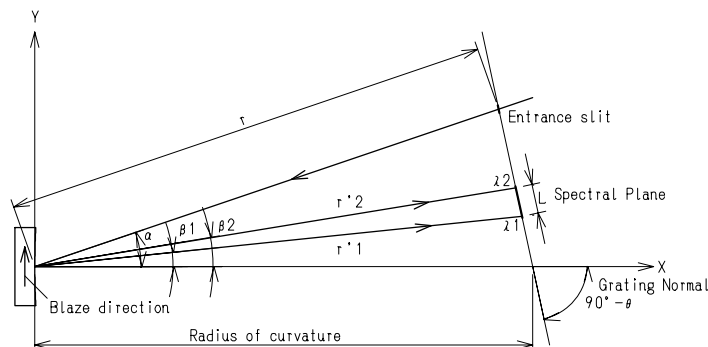


# Hitachi Aberration-Corrected Concave Gratings for Flat-Field Spectrographs

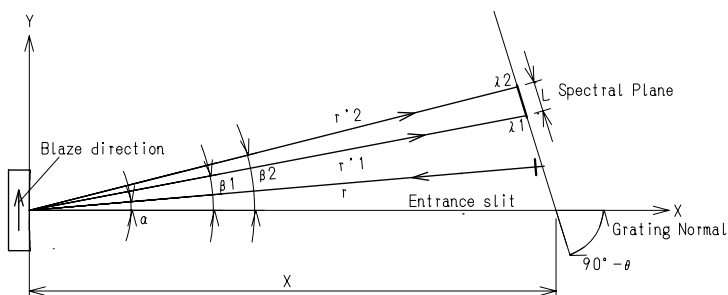
## Normal-Incidence: 4 Types (A to D)

### Normal-incidence Type A



Part No.	Grooves per mm	Radius of curvature (mm)	Blaze WL (nm)	Blank size H×W×T (mm)	Blaze angle (degree)	$\alpha$ (degree)	$r$ (mm)	$\theta$ (degree)	$\beta_1$ (degree)	$r'_1$ (mm)	$\beta_2$ (degree)	$r'_2$ (mm)	$L$ (mm)	WL Range $\lambda_1$ to $\lambda_2$ (nm)
001-0287	600	200	785	30×30×10	13.7	19.8	197.22	12.2	6.39	196.49	9.86	195.83	11.9	750~850
001-0295	600	400	769	28×38×10	13.4	19.1	394.28	12	6.01	393.4	9.48	391.64	23.83	720~820
001-0296	600	400	786	28×38×10	13.7	19.78	425.08	0	6.41	402.51	9.88	406.02	25.18	750~850
001-0297	600	500	786	45×60×10	13.7	19.78	531.35	0	6.41	503.14	9.88	507.53	30.91	750~850

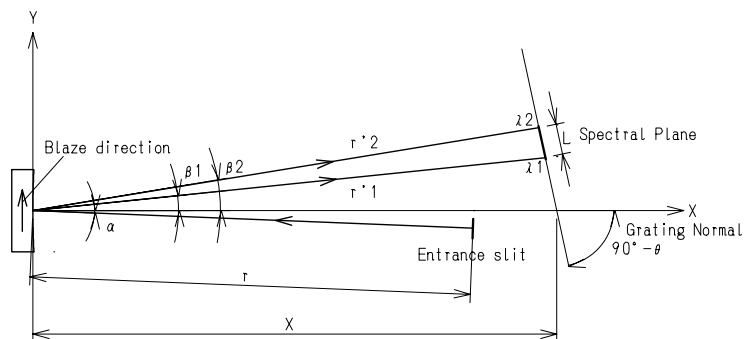
### Normal-incidence Type B



Part No.	Grooves per mm	Radius of curvature (mm)	Blaze WL (nm)	Blank size H×W×T (mm)	Blaze angle (degree)	$\alpha$ (degree)	$r$ (mm)	$X$ (mm)	$\theta$ (degree)	$\beta_1$ (degree)	$r'_1$ (mm)	$\beta_2$ (degree)	$r'_2$ (mm)	$L$ (mm)	WL Range $\lambda_1$ to $\lambda_2$ (nm)
001-0258	600	100	249	12×12×5	4.3	0	105	102.62	15.183	11.77	99.216	21.1	99.571	16.17	340~600
001-0273	600	150	448	25×20×5	7.8	0	150	165.92	13.847	15.31	161.15	24.83	164.11	27.16	440~700
001-0275	600	150	493	50×40×10	8.6	6	156.75	160.8	16.67	14.41	154.16	24	155.31	25.89	589~852
001-0276	600	200	232	25×20×5	4	0	200	204.2	7.03	7.24	202.67	9.67	202.88	8.59	210~280

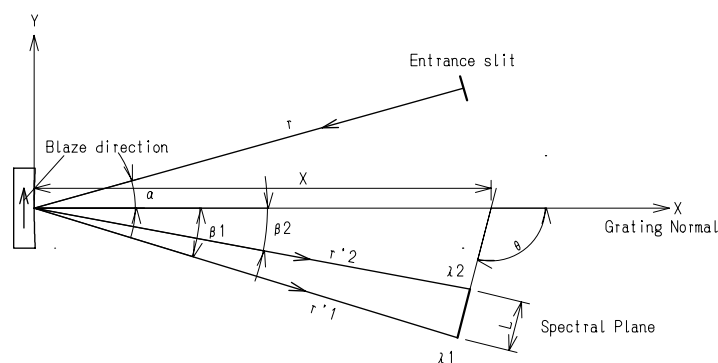
# Hitachi Aberration-Corrected Concave Gratings for Flat-Field Spectrographs

## Normal-incidence Type C



Part No.	Grooves per mm	Radius of curvature (mm)	Blaze WL (nm)	Blank size H×W×T (mm)	Blaze angle (degree)	$\alpha$ (degree)	r (mm)	X (mm)	$\theta$ (degree)	$\beta 1$ (degree)	r'1 (mm)	$\beta 2$ (degree)	r'2 (mm)	L (mm)	WL Range $\lambda 1$ to $\lambda 2$ (nm)
001-0245	300	50	253	9×9×5	2.2	-5.6	50.94	50	8	9.84	49.542	18.71	50.409	7.78	250~750
001-0248	330	149.5	222	25×25×5	2.1	-1	149.5	151.93	15.683	4.79	148.96	10.9	146.78	15.91	200~520
001-0253	500	100	207	20×18×5	3	-5.2	102.05	100	10	10.7	98.49	15.11	98.87	7.6	190~340

## Normal-incidence Type D



Part No.	Grooves per mm	Radius of curvature (mm)	Blaze WL (nm)	Blank size H×W×T (mm)	Blaze angle (degree)	$\alpha$ (degree)	r (mm)	X (mm)	$\theta$ (degree)	$\beta 1$ (degree)	r'1 (mm)	$\beta 2$ (degree)	r'2 (mm)	L (mm)	WL Range $\lambda 1$ to $\lambda 2$ (nm)
001-0464	1200	500	60	50×50×10	3.08	51	314.66	429.18	132.74	-46.81	315.97	-39.28	315.752	41.6	40~120

## References

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2. T. Harada and H. Sakuma, T. Kita, M. Nakamura, "Design of EUV spectrometer with stigmatic image focusing using spherical varied line-space gratings", Proc. Soc. Photo-Opt. Instrum. Eng. 2283(1994)
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