

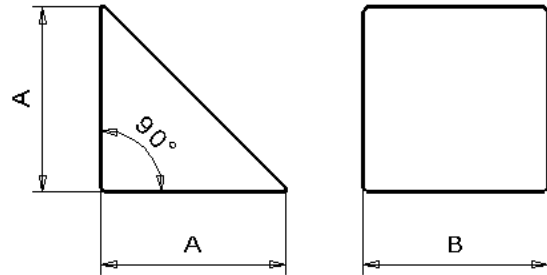
# DATA SHEET

# UNCOATED RIGHT ANGLE PRISMS

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**Description:** Prisms used to re-direct light 90° or used as 180° retro-reflector.

ID	2012	2043
A	12.7mm	20mm
B	12.7mm	20mm
Dimensional Tolerances	±0.13mm	±0.13mm
Angle Tolerances	±10arcmin	±10arcmin
Surface Quality (Scratch/Dig)	60-40	60-40
Bevel	0.3mm x 45°	0.3mm x 45°



Optical Glass H-K9L	
Corresponding glass types: BSC7, N-BK7, S-BSL7	
ROHS: Compliant	
$n_d=1.51680$	$v_d=64.20$
$n_e=1.51872$	$v_e=64.0$

Refractive Indices		
	$[\lambda]=\text{nm}$	
$n_f$	706.5	1.5128
$n_c$	656.3	1.51432
$n_{c-}$	643.8	1.51472
$n_{\text{He-Ne}}$	632.8	1.51509
$n_D$	589.3	1.51673
$n_d$	587.6	1.51680
$n_e$	546.1	1.51872
$n_F$	486.1	1.52237
$n_{F-}$	480.0	1.52282
$n_g$	435.8	1.52667
$n_h$	404.7	1.53022
$n_i$	365.0	1.53622

Internal Transmittance		
$\lambda$ (nm)	at 5mm	at 10mm
2400	0.86	0.74
2200	0.930	0.86
2000	0.960	0.922
1800	0.985	0.970
1600	0.990	0.980
1400	0.995	0.990
1200	0.998	0.996
1060	0.998	0.996
1000	0.999	0.997
950	0.999	0.997
900	0.999	0.998
850	0.999	0.998
800	0.999	0.999
700	0.999	0.999
650	0.999	0.998
600	0.999	0.999
550	0.999	0.999
500	0.999	0.998
480	0.999	0.998
460	0.999	0.998
440	0.999	0.997
420	0.999	0.998
400	0.999	0.998
390	0.998	0.997
380	0.997	0.993
370	0.997	0.993
360	0.994	0.988
350	0.989	0.977
340	0.977	0.954
330	0.95	0.91
320	0.90	0.8
310	0.80	0.63
300	0.61	0.38
290	0.36	0.13
280	0.14	0.02

Thermal Properties	
$T_g$ (°C)	565
$T_s$ (°C)	630
$T_{10}^{14.5}$ (°C)	511
$T_{10}^{13}$ (°C)	547
$\alpha$ (-60...20 °C) ( $10^{-7}/\text{K}$ )	75
$\alpha$ (20...300 °C) ( $10^{-7}/\text{K}$ )	82

Mechanical Properties	
$H_K$ ( $10^7\text{Pa}$ )	595
$F_A$	1.00
$E$ ( $10^7\text{Pa}$ )	7920
$G$ ( $10^7\text{Pa}$ )	3270
$\mu$	0.211

Stress-Optical Coefficient	
$B$ ( $10^{-12}/\text{Pa}$ )	2.70

Coloration Code	
$\lambda_{80}/\lambda_5$	33/29

Other Properties	
$\rho$ ( $\text{g}/\text{cm}^3$ )	2.52

Constants of Dispersion Formula	
$A_0$	2.2702566
$A_1$	$-9.1988101 \cdot 10^{-3}$
$A_1$	$1.1609706 \cdot 10^{-2}$
$A_3$	$-7.6123911 \cdot 10^{-5}$
$A_4$	$2.8558727 \cdot 10^{-5}$
$A_5$	$-1.2566486 \cdot 10^{-6}$

Relative Partial Dispersions			
$P_{d,c}$	0.3080	$P'_{d,c}$	0.2569
$P_{e,d}$	0.2387	$P'_{e,d}$	0.2371
$P_{g,F}$	0.5342	$P'_{g,F}$	0.4748

Deviation of relative Partial Dispersions $\Delta P$ from the Normal Line	
$\Delta P_{F,e}$	-0.0014
$\Delta P_{g,F}$	-0.0035