

# J-PSK02

$n_d = 1.618000$

$n_e = 1.620328$

$v_d = 63.34$

$v_e = 63.06$

Glass code (d)
618633
Glass code (e)
620631

Spectral l.	Refractive idx
2.058	1.59332
1.970	1.59459
1.530	1.60036
1.129	1.60533
1.064	1.60622
t	1.60695
s	1.60973
A'	1.611614
r	1.613326
C	1.615024
C'	1.615498
He-Ne	1.615941
D	1.617913
d	1.618000
e	1.620328
F	1.624781
F'	1.625335
g	1.630061
h	1.634432
0.389	1.637092
i	1.641858

Coef. disp. form. (pwr ser.)	
A0	2.57826227E+00
A1	-9.69723449E-03
A2	-1.07085207E-04
A3	1.43480110E-02
A4	1.59222199E-04
A5	5.33085601E-06
A6	-5.80638431E-08
A7	0.00000000E+00
A8	0.00000000E+00

Partial dispersion	
F-C	0.009757
F'-C'	0.009837
C-t	0.008074
C-A'	0.003410
d-C	0.002976
e-C	0.005304
g-d	0.012061
g-F	0.005280
h-g	0.004371
i-g	0.011797
C'-t	0.008548
e-C'	0.004830
F'-e	0.005007
i-F'	0.016523

Relative partial dispersion	
C-t/F-C	0.8275
C-A'/F-C	0.3495
d-C/F-C	0.3050
e-C/F-C	0.5436
g-d/F-C	1.2361
g-F/F-C	0.5411
h-g/F-C	0.4480
i-g/F-C	1.2091
C'-t/F'-C'	0.8690
e-C'/F'-C'	0.4910
F'-e/F'-C'	0.5090
i-F'/F'-C'	1.6797

Deviation of relative partial disp.	
$\Delta PdC$	-0.0008
$\Delta PgF$	0.0031

Internal CC (80%/5%)	
363/317	
Color Code (80%/5%)	
375/315	
CCI	
B	0.00
G	0.51
R	0.46

Thermal properties	
CTE(-30,70) [1E-7/°C]	90
CTE(100,300) [1E-7/°C]	107
Tg [°C]	620
At [°C]	661
StP [°C]	573
AP [°C]	606
SP [°C]	719
Ht condct. [W/m·K]	0.692
Sp. heat [kJ/kg·K]	0.561
Ht diffus. [1E-6 m2/sec]	0.346

Chemical properties [class]	
Acid res. (surface)	5
Alkaline detergent res.	4
Climate resistance	1
Water res. (powder)	2
Acid res. (powder)	5

Mechanical properties	
Knoop hardness	355 (4)
Abrasion hardness	341
Young's mod. [GPa]	73.3
Shear mod. [GPa]	28.4
Poisson's ratio	0.291
Stress optical coef. [1E-5 nm/cm/Pa]	1.42

Internal trans. (10mm)	
$\lambda$ [nm]	$\tau$
280	-
290	-
300	-
310	-
320	0.08
330	0.22
340	0.41
350	0.60
360	0.76
370	0.86
380	0.923
390	0.956
400	0.974
420	0.987
440	0.991
460	0.993
480	0.996
500	0.997
550	0.998
600	0.998
650	0.996
700	0.997
800	0.995
900	0.993
1000	0.993
1200	0.994
1400	0.992
1600	0.986
1800	0.973
2000	0.956
2200	0.88
2400	0.77

Specific gravity
3.56

Relative $\Delta n / \Delta T$ [1E-6/°C]																
Temp. [°C]	1.083	t	s	A'	r	C	C'	He-Ne	d	e	F	F'	g	h	0.389	
80 to 90 (ref.)	-2.8	-2.8	-2.7	-2.6	-2.6	-2.5	-2.5	-2.4	-2.3	-2.2	-1.9	-1.9	-1.6	-1.3	-1.1	
60 to 80 (ref.)	-2.9	-2.8	-2.7	-2.7	-2.6	-2.5	-2.5	-2.5	-2.4	-2.2	-2.0	-1.9	-1.7	-1.4	-1.2	
40 to 60	-2.9	-2.8	-2.8	-2.7	-2.6	-2.5	-2.5	-2.5	-2.4	-2.3	-2.0	-2.0	-1.7	-1.5	-1.3	
20 to 40	-2.9	-2.8	-2.7	-2.7	-2.6	-2.6	-2.5	-2.5	-2.4	-2.3	-2.0	-2.0	-1.8	-1.5	-1.3	
0 to 20	-2.8	-2.8	-2.7	-2.7	-2.6	-2.5	-2.5	-2.5	-2.4	-2.3	-2.0	-2.0	-1.7	-1.5	-1.3	
-20 to 0	-2.7	-2.7	-2.6	-2.6	-2.5	-2.4	-2.4	-2.4	-2.3	-2.2	-2.0	-1.9	-1.7	-1.5	-1.3	
-40 to -20	-2.6	-2.5	-2.5	-2.4	-2.4	-2.3	-2.3	-2.3	-2.2	-2.0	-1.8	-1.8	-1.6	-1.3	-1.2	
-60 to -40 (ref.)	-2.3	-2.3	-2.2	-2.2	-2.1	-2.1	-2.0	-2.0	-1.9	-1.8	-1.6	-1.6	-1.4	-1.1	-1.0	
-70 to -60 (ref.)	-2.1	-2.0	-2.0	-1.9	-1.9	-1.8	-1.8	-1.8	-1.7	-1.6	-1.4	-1.3	-1.1	-0.9	-0.7	

Absolute $\Delta n / \Delta T$ [1E-6/°C]																
Temp. [°C]	1.083	t	s	A'	r	C	C'	He-Ne	d	e	F	F'	g	h	0.389	
80 to 90	-3.8	-3.8	-3.7	-3.6	-3.6	-3.5	-3.5	-3.4	-3.3	-3.2	-2.9	-2.9	-2.6	-2.3	-2.1	
60 to 80	-3.9	-3.9	-3.8	-3.8	-3.7	-3.6	-3.6	-3.6	-3.5	-3.3	-3.1	-3.0	-2.8	-2.5	-2.3	
40 to 60	-4.1	-4.1	-4.0	-3.9	-3.9	-3.8	-3.8	-3.7	-3.6	-3.5	-3.3	-3.2	-3.0	-2.7	-2.5	
20 to 40	-4.3	-4.2	-4.1	-4.1	-4.0	-4.0	-3.9	-3.9	-3.8	-3.7	-3.5	-3.4	-3.2	-3.0	-2.8	
0 to 20	-4.4	-4.4	-4.3	-4.3	-4.2	-4.1	-4.1	-4.1	-4.0	-3.9	-3.7	-3.6	-3.4	-3.2	-3.0	
-20 to 0	-4.6	-4.6	-4.5	-4.4	-4.4	-4.3	-4.3	-4.3	-4.2	-4.1	-3.9	-3.8	-3.6	-3.4	-3.2	
-40 to -20	-4.7	-4.7	-4.6	-4.6	-4.5	-4.5	-4.5	-4.4	-4.4	-4.3	-4.1	-4.0	-3.8	-3.6	-3.5	
-60 to -40	-4.9	-4.9	-4.8	-4.8	-4.7	-4.7	-4.6	-4.6	-4.5	-4.4	-4.2	-4.2	-4.0	-3.8	-3.7	
-70 to -60	-5.0	-5.0	-4.9	-4.9	-4.8	-4.8	-4.8	-4.8	-4.7	-4.6	-4.4	-4.4	-4.2	-4.0	-3.8	

Coef. disp. form. (frac. eq.) (ref.)	
P1	1.20459741E-01
Q1	8.62206490E+01
P2	4.43027945E-02
Q2	1.76922785E-02
P3	3.00450152E-01
Q3	4.19488634E-03

Fitting error of disp. form. $\sigma$ [1E-6]		
	Visible	Infrared
Power ser. eq.	0.5	3.1
Frac. eq. (ref.)	0.5	3.2

Prod. Freq. (A to D)	A
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Similar glass type			
OHARA	S-PHM52, S-PHM52Q	HOYA	PCD4
CDGM	H-ZPK1A	SCHOTT	N-PSK53A

2022-7-1	StP, AP, SP
2020-4-1	Similar glass type
2019-4-1	Transmittance