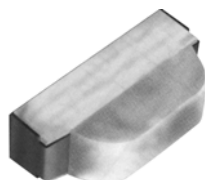


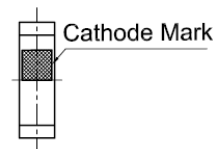
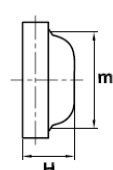
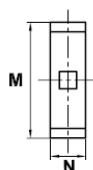
PCB Chip Types

PCB Chip, Right Angle Type, Side View Flat Top

SMD LED



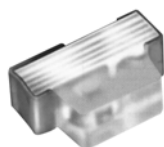
RoHS



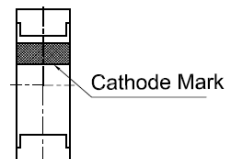
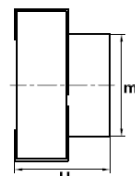
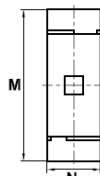
TCI Part No.	Chip			Lens Color	I _v (mcd)			V _F (v)			Viewing Angle 2θ1/2	Outline (mm)			
	Material	Emitted Color	λD(nm)		Min.	Typ.	at I _F =mA	Typ.	Max.	at I _F =mA		M	N	m	H
TSPR-WS2110-NPY	InGaP	White	x=0.29 y=0.30	Yellow Diffused	28.5	45	5	2.9	3.15	5	140°	2.1	0.6	1.7	1.0
TSPR-CS2110	GaN	Purplish Blue	466	Water Clear	18	22	20	3.8	4.5	20	130°	2.1	0.6	1.7	1.0
TSPR-BS2110-N1P2	InGaP	Super Blue	470	Water Clear	28.5	45	20	3.3	3.7	20	130°	2.1	0.6	1.7	1.0
TSPR-TS2110-R1S2	InGaP	True Green	525	Water Clear	112	180	20	3.3	3.7	20	130°	2.1	0.6	1.7	1.0
TSPR-FS2110E2	AlInGaP	Yellowish Green	573	Water Clear	16.8	20.5	20	2.0	2.4	20	130°	2.1	0.6	1.7	1.0
TSPR-XS2110A3	AlInGaP	Super Yellow	589	Water Clear	36	57	20	2.0	2.4	20	130°	2.1	0.6	1.7	1.0
TSPR-QS2110A3	AlInGaP	Super Red	624	Water Clear	36	57	20	2.05	2.35	20	130°	2.1	0.6	1.7	1.0

PCB Chip, Right Angle Type, Side View Flat Top

SMD LED



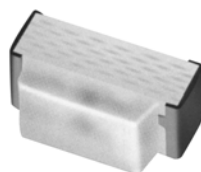
RoHS



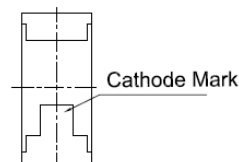
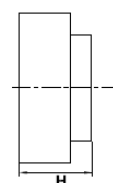
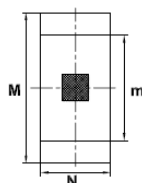
TCI Part No.	Chip			Lens Color	I _v (mcd)			V _F (v)			Viewing Angle 2θ1/2	Outline (mm)			
	Material	Emitted Color	λD(nm)		Min.	Typ.	at I _F =mA	Typ.	Max.	at I _F =mA		M	N	m	H
TSPR-WS1711-NQY	InGaP	White	x=0.29 y=0.30	Yellow Diffused	28.5	72	5	2.9	3.15	5	140°	1.7	0.6	1.2	1.1
TSPR-CS1711	GaN	Purplish Blue	466	Water Clear	14	20	20	3.8	4.5	20	130°	1.7	0.6	1.2	1.1
TSPR-BS1711-N1P2	InGaP	Super Blue	470	Water Clear	28.5	45	20	3.3	3.7	20	130°	1.7	0.6	1.2	1.1
TSPR-TS1711-R2T1	InGaP	True Green	525	Water Clear	140	225	20	3.3	3.7	20	130°	1.7	0.6	1.2	1.1
TSPR-FS1711E2	AlInGaP	Yellowish Green	573	Water Clear	16	22	20	2.0	2.4	20	130°	1.7	0.6	1.2	1.1
TSPR-XS1711A3	AlInGaP	Super Yellow	589	Water Clear	36	57	20	2.0	2.4	20	130°	1.7	0.6	1.2	1.1
TSPR-QS1711A3	AlInGaP	Super Red	624	Water Clear	36	57	20	2.05	2.35	20	130°	1.7	0.6	1.2	1.1

PCB Chip, Right Angle Type, Side View Flat Top

SMD LED



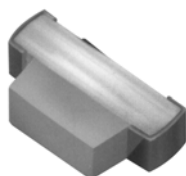
RoHS



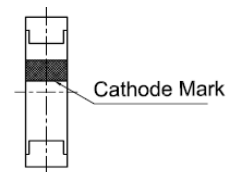
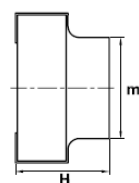
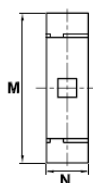
TCI Part No.	Chip			Lens Color	I _v (mcd)			V _F (v)			Viewing Angle 2θ1/2	Outline (mm)			
	Material	Emitted Color	λD(nm)		Min.	Typ.	at I _F =mA	Typ.	Max.	at I _F =mA		M	N	m	H
TSPR-CS2713	GaN	Purplish Blue	466	Water Clear	15	17	20	3.8	4.5	20	130°	2.7	1.2	2.0	1.3
TSPR-BS2713-N1P2	InGaP	Super Blue	470	Water Clear	28.5	45	20	3.3	3.7	20	130°	2.7	1.2	2.0	1.3
TSPR-TS2713-R1S2	InGaP	True Green	525	Water Clear	112	180	20	3.3	3.7	20	130°	2.7	1.2	2.0	1.3
TSPR-FS2713E2	AlInGaP	Yellowish Green	573	Water Clear	15	21	20	2.0	2.4	20	130°	2.7	1.2	2.0	1.3
TSPR-XS2713A3	AlInGaP	Super Yellow	589	Water Clear	37	58	20	2.0	2.4	20	130°	2.7	1.2	2.0	1.3
TSPR-QS2713A3	AlInGaP	Super Red	624	Water Clear	36	56	20	2.0	2.4	20	130°	2.7	1.2	2.0	1.3

PCB Chip, Right Angle Type, Side View Flat Top

SMD LED



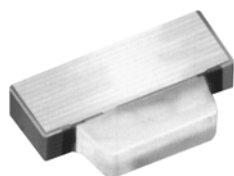
RoHS



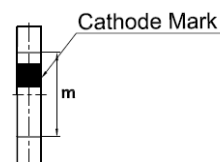
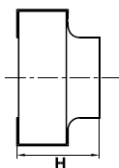
TCI Part No.	Chip			Lens Color	I_v (mcd)			V_F (v)			Viewing Angle $2\theta_{1/2}$	Outline (mm)			
	Material	Emitted Color	λ_D (nm)		Min.	Typ.	at $I_F = \text{mA}$	Typ.	Max.	at $I_F = \text{mA}$		M	N	m	H
TSPR-WS1811-NPY	InGaN	White	$x=0.29$ $y=0.30$	Yellow Diffused	28.5	45	5	2.9	3.15	5	140°	1.8	0.5	1.1	1.1
TSPR-WS1811-R2S2					140	225	10	3.0	3.4	10	140°	1.8	0.5	1.1	1.1

PCB Chip, Right Angle Type, Side View Flat Top

SMD LED



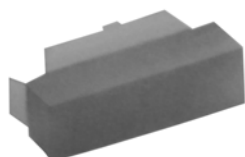
RoHS



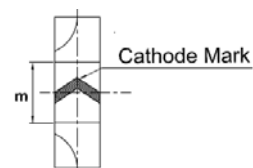
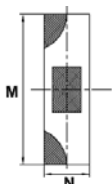
TCI Part No.	Chip			Lens Color	I_v (mcd)			V_F (v)			Viewing Angle $2\theta_{1/2}$	Outline (mm)			
	Material	Emitted Color	λ_D (nm)		Min.	Typ.	at $I_F = \text{mA}$	Typ.	Max.	at $I_F = \text{mA}$		M	N	m	H
TSPR-BS1810-M2P1Y	InGaN	Super Blue	470	Water Clear	22.5	36	5	3.0	3.2	5	120°	1.8	0.3	1.1	1.0
TSPR-QS1810-M1N1Y	AlInGaP	Super Red	624	Water Clear	18	28.5	5	2.0	2.2	5	120°	1.8	0.3	1.1	1.0
TSPR-WS1810-Q2R2Y	InGaN	White	$x=0.274$ $y=0.226$	Yellow Diffused	90	112	5	3.0	3.2	5	130°	1.8	0.3	1.1	1.0
TSPR-WS1810-P1Q2Y	InGaN	White	$x=0.274$ $y=0.226$	Yellow Diffused	45	72	5	2.8	3.0	5	130°	1.8	0.3	1.1	1.0
TSPR-WS1810-Q1R2Y	InGaN	White	$x=0.274$ $y=0.226$	Yellow Diffused	72	112	5	3.0	3.2	5	130°	1.8	0.3	1.1	1.0

PCB Chip, Right Angle Type, Side View Flat Top

SMD LED



RoHS



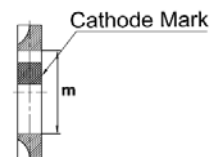
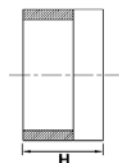
TCI Part No.	Chip			Lens Color	I_v (mcd)			V_F (v)			Viewing Angle $2\theta_{1/2}$	Outline (mm)			
	Material	Emitted Color	λ_D (nm)		Min.	Typ.	at $I_F = \text{mA}$	Typ.	Max.	at $I_F = \text{mA}$		M	N	m	H
TSPR-WS1005-P1Q2Y	InGaN	White	$x=0.29$ $y=0.30$	Yellow Diffused	45	72	5	2.9	3.2	5	130°	1.0	0.3	0.4	0.5
TSPR-QS1005-L1M2Y	AlInGaP	Super Red	624	Super Red	11.5	18	5	1.9	2.2	5	125°	1.0	0.3	0.4	0.5

PCB Chip, Right Angle Type, Side View Flat Top

SMD LED



RoHS



TCI Part No.	Chip			Lens Color	I_v (mcd)			V_F (v)			Viewing Angle $2\theta_{1/2}$	Outline (mm)			
	Material	Emitted Color	λ_D (nm)		Min.	Typ.	at $I_F =$ mA	Typ.	Max.	at $I_F =$ mA		M	N	m	H
TSPR-WS1810-R2S2Y	InGaN	White	$x=0.29$ $y=0.30$	Yellow Diffused	140	225	5	2.9	3.1	5	130°	1.8	0.3	1.2	1.0