

TYNTEK CORPORATION



(주)에이스 로얄테크
ACE Royal Tech Inc.

LEDs Product Short Form

Visible LED

GaP Green

560nm Pure Green
567nm Standard Green
569nm Medium Green

GaP Yellow Green 572nm

GaAsP Yellow / Soft Orange

585nm Yellow / 605nm Soft Orange

GaAsP Red Orange

618nm Red Orange
628nm Red Orange

AlGaInP Yellow Green / Yellow

572nm Yellow Green / 588nm Yellow

AlGaInP Soft Orange / Red Orange

605nm Soft Orange / 625nm Red Orange
630nm Super Red
640nm Deep Red

AlGaInP -Wafer Bond Yellow / Red Orange

UOH (Hyper Red)
DRH (Hyper Deep Red)

Infrared LED

LPE TYPE

IRB(700nm) IRD(730nm) IRE(770nm)
IRV(810nm) IRK(830nm)
IRP(850nm)
IRS(870nm)
IRQ(890nm, P up)
IRP(890nm, N up)
IRN(900nm) IRF(910nm)
IRA(940nm), AlGaAs
IRG(940nm), GaAs

MOCVD TYPE IRA(950nm)

Wafer Bond TYPE

IRD(730nm), IRC(750nm), IRN(810nm),
IRK(830nm),
IRP(850nm); chip size 10~42 mil
IRS(880nm), IRF(910nm)
IRA(940nm); chip size 8~38 mil

Visible LED

GaP Green



(주)에이스 로얄테크
ACE Royal Tech Inc.

Color(Wd)	Part no.	Material	Top Polarity	Size (um)	Thickness (um)	Iv(mcd)	Wd(nm)	VF(V)
						Typ	Typ.	Max.
560nm Pure Green	TK0110PGN	GaP/GaP	P	250	260	2~5	560	2.40
	TK0111PGN	GaP/GaP	P	275	260	2~5	560	2.40
567nm Standard Green	TK0110SGN	GaP/GaP	P	250	260	5~10	567	2.40
	TK0111SGN	GaP/GaP	P	275	260	6~11	567	2.40
569nm Medium Green	TK0108MGN	GaP/GaP	P	195	240	7~12	569	2.50
	TK0109MGN	GaP/GaP	P	225	260	8~13	569	2.40
	TK0110MGN	GaP/GaP	P	250	260	8~14	569	2.40
	TK0111MGN	GaP/GaP	P	275	260	9~15	569	2.40

Visible LED

GaP Yellow Green-1



(주)에이스 로얄테크
ACE Royal Tech Inc.

Color(Wd)	Part no.	Material	Top Polarity	Size (um)	Thickness (um)	Iv(mcd)	Wd(nm)	VF(V)
						Typ	Typ.	Max.
572nm Yellow Green	TK0107YGU	GaP/GaP	P	175	210	8~12	572	2.50
	TK0108YGU	GaP/GaP	P	195	210	8~13	572	2.50
	TK0109YGU	GaP/GaP	P	225	210	10~15	572	2.40
	TK0109YGM	GaP/GaP	P	225	210	10~15	572	2.40
	TK0110YGU	GaP/GaP	P	250	210	10~18	572	2.40
	TK0111YGU	GaP/GaP	P	275	260	11~19	572	2.40
	TK0112YGU	GaP/GaP	P	300	260	12~19	572	2.40
	TK0113YGU	GaP/GaP	P	330	260	13~21	572	2.40
	TK0114YGU	GaP/GaP	P	355	260	13~21	572	2.40

Visible LED

GaP Yellow Green-2



(주)에이스 로얄테크
ACE Royal Tech Inc.

Color(Wd)	Part no.	Material	Top Polarity	Size (um)	Thickness (um)	Iv(mcd)	Wd(nm)	VF(V)
						Typ	Typ.	Max.
572nm Yellow Green	TK0811YGU	GaP/GaP	P	275	260	10~18	572	2.40
	TK0812YGU	GaP/GaP	P	300	260	11~19	572	2.40
	TK0108YGS	GaP/GaP	P	195	180	8~13	572	2.50
	TK0110YGS	GaP/GaP	P	250	180	10~18	572	2.40
	TK0112YGS	GaP/GaP	P	300	180	12~19	572	2.40
	TK0209YGN	GaP/GaP	N	250	260	4~9	572	2.40
	TK0210YGN	GaP/GaP	N	250	260	5~9	572	2.40
	TK0211YGN	GaP/GaP	N	275	260	5~10	572	2.40

Visible LED



(주)에이스 로얄테크
ACE Royal Tech Inc.

GaAsP Yellow / Soft Orange

Color(Wd)	Part no.	Material	Top Polarity	Size (um)	Thickness (um)	Iv(mcd)	Wd(nm)	VF(V)
						Typ	Typ.	Max.
585nm Yellow	TK0107HYN	GaAsP/GaP	P	175	210	3~5	585	2.50
	TK0108HYN	GaAsP/GaP	P	195	210	3~6	585	2.50
	TK0109HYN	GaAsP/GaP	P	225	210	3~7	585	2.40
	TK0110HYN	GaAsP/GaP	P	250	210	4~7	585	2.40
	TK0111HYN	GaAsP/GaP	P	275	210	4~7	585	2.40
	TK0109HYH	GaAsP/GaP	P	225	210	6~10	585	2.40
	TK0110HYH	GaAsP/GaP	P	250	210	7~11	585	2.40
605nm Soft Orange	TK0107SON	GaAsP/GaP	P	175	210	5~8	607	2.50
	TK0108SON	GaAsP/GaP	P	195	210	5~10	607	2.50
	TK0109SON	GaAsP/GaP	P	225	210	6~10	607	2.40
	TK0110SON	GaAsP/GaP	P	250	210	6~11	607	2.40
	TK0111SON	GaAsP/GaP	P	275	210	6~11	607	2.40

Visible LED

GaAsP Red Orange



(주)에이스 로얄테크
ACE Royal Tech Inc.

Color(Wd)	Part no.	Material	Top Polarity	Size (um)	Thickness (um)	Iv(mcd)	Wd(nm)	VF(V)
						Typ	Typ.	Max.
618nm Red Orange	TK0107HON	GaAsP/GaP	P	175	210	7~12	618	2.50
	TK0108HON	GaAsP/GaP	P	195	210	8~13	618	2.50
	TK0109HON	GaAsP/GaP	P	225	210	8~14	618	2.40
	TK0110HON	GaAsP/GaP	P	250	210	9~15	618	2.40
	TK0111HON	GaAsP/GaP	P	275	210	9~16	618	2.40
628nm Red Orange	TK0207HOD	GaAsP/GaP	P	175	210	6~10	628	2.50
	TK0208HOD	GaAsP/GaP	P	195	210	8~13	628	2.50
	TK0209HOD	GaAsP/GaP	P	225	210	8~14	628	2.40
	TK0210HOD	GaAsP/GaP	P	250	210	8~14	628	2.40

Visible LED

AlGaInP Yellow Green / Yellow



(주)에이스 로얄테크
ACE Royal Tech Inc.

Color(Wd)	Part no.	Material	Top Polarity	Size (um)	Thickness (um)	Iv(mcd)	Wd(nm)	VF(V)
						Min	Typ.	Max.
572nm Yellow Green	TK0507YGN	AlGaInP/GaAs	P	175	180	20	571	2.30
	TK0508YGN	AlGaInP/GaAs	P	195	180	30	571	2.30
	TK0509YGN	AlGaInP/GaAs	P	225	180	30	571	2.30
	TK0508YGS	AlGaInP/GaAs	P	195	100	30	571	2.30
588nm Yellow	TK0508UYN	AlGaInP/GaAs	P	195	180	50	589	2.30
	TK0509UYN	AlGaInP/GaAs	P	225	180	60	591	2.30
	TK0512UYN	AlGaInP/GaAs	P	300	180	70	591	2.30

Visible LED



(주)에이스 로얄테크
ACE Royal Tech Inc.

AlGaInP Soft Orange / Red Orange

Color(Wd)	Part no.	Material	Top Polarity	Size (um)	Thickness (um)	Iv(mcd)	Wd(nm)	VF(V)
						Min	Typ.	Max.
605nm Soft Orange	TK0507SON	AlGaInP/GaAs	P	175	180	60	605	2.30
	TK0508SON	AlGaInP/GaAs	P	195	180	60	605	2.30
	TK0509SON	AlGaInP/GaAs	P	225	180	70	605	2.30
	TK0512SON	AlGaInP/GaAs	P	275	180	80	605	2.30
625nm Red Orange	TK0508UON	AlGaInP/GaAs	P	195	180	50	622	2.30
	TK0509UON	AlGaInP/GaAs	P	225	180	60	622	2.30
	TK0512UON	AlGaInP/GaAs	P	275	180	80	622	2.30

Visible LED



(주)에이스 로얄테크
ACE Royal Tech Inc.

AlGaInP Soft Orange / Red Orange

Color(Wd)	Part no.	Material	Top Polarity	Size (um)	Thickness (um)	Iv(mcd)	Wd(nm)	VF(V)
						Min	Typ.	Max.
630nm Super Red	TK0508SRN	AlGaInP/GaAs	P	195	180	30	629	2.30
	TK0509SRN	AlGaInP/GaAs	P	225	180	40	629	2.30
	TK0512SRN	AlGaInP/GaAs	P	275	180	50	629	2.30
640nm Deep Red	TK0508DRN	AlGaInP/GaAs	P	195	180	25	639	2.30
	TK0509DRN	AlGaInP/GaAs	P	225	180	25	639	2.30

Visible LED



(주)에이스 로얄테크
ACE Royal Tech Inc.

AlGaInP - Wafer Bond Yellow / Red Orange

Color(Wd)	Part no.	Material	Top Polarity	Size (um)	Thickness (um)	Iv(mcd)	Wd(nm)	VF(V)
						Min	Typ.	Max.
Hyper Red	TK0509UOH	AlInGaP/Si	N	225	170	180	623	2.40
	TK0512UOH	AlInGaP/Si	N	300	200	220	623	2.40
Hyper Deep Red	TK0512DRH	AlInGaP/Si	N	300	200	120	640	2.40
	TK0520DRH	AlInGaP/Si	N	500	200	850	640	2.75

Infrared LED



(주)에이스 로얄테크
ACE Royal Tech Inc.

LPE TYPE

Wp(nm)	Part no.	Material	Top Polarity	Size (um)	Thickness (um)	Po(mW)	Wp(nm)	VF(V)
						Typ	Typ.	Max.
IRB(700nm)	TK0114IRB	AlGaAs/AlGaAs	P	350	160	4.0	700	1.90
IRD(730nm)	TK0114IRD	AlGaAs/AlGaAs	P	350	160	4.0	730	1.90
	TK0120IRD	AlGaAs/AlGaAs	P	505	160	4.2	730	1.80
	TK0H40IRD	AlGaAs/AlGaAs	P	1015	160	4.5	730	1.75
	TK0N14IRD	AlGaAs/AlGaAs	N	350	150	4.8	724	2.00
IRE(770nm)	TK0114IRE	AlGaAs/AlGaAs	P	350	160	4.0	770	1.90
	TK0120IRE	AlGaAs/AlGaAs	P	505	160	4.2	770	1.85
	TK0124IRE	AlGaAs/AlGaAs	P	610	160	4.5	770	1.75
	TK0H40IRE	AlGaAs/AlGaAs	P	1015	160	4.5	770	1.75
	TK0N14IRE	AlGaAs/AlGaAs	N	350	155	4.8	770	1.90

Infrared LED



(주)에이스 로얄테크
ACE Royal Tech Inc.

LPE TYPE

Wp(nm)	Part no.	Material	Top Polarity	Size (um)	Thickness (um)	Po(mW)	Wp(nm)	VF(V)
						Typ	Typ.	Max.
IRV(810nm)	TK0114IRV	AlGaAs/AlGaAs	P	350	180	4.5	810	1.65
	TK0N14IRV	AlGaAs/AlGaAs	N	350	170	4.6	810	1.80
IRK(830nm)	TK0114IRK	AlGaAs/AlGaAs	P	350	175	4.5	830	1.60
IRP(850nm)	TK0110IRP	AlGaAs/AlGaAs	P	250	175	3.6~5.0	850	1.70
	TK0112IRP	AlGaAs/AlGaAs	P	300	175	4.0~5.8	850	1.65
	TK0114IRP	AlGaAs/AlGaAs	P	350	175	4.2~6.3	850	1.60
	TK0116IRP	AlGaAs/AlGaAs	P	400	175	4.2~6.5	850	1.55
	TK0120IRP	AlGaAs/AlGaAs	p	505	175	4.8~6.8	850	1.50

Infrared LED



(주)에이스 로얄테크
ACE Royal Tech Inc.

LPE TYPE

Wp(nm)	Part no.	Material	Top Polarity	Size (um)	Thickness (um)	Po(mW)	Wp(nm)	VF(V)
						Typ	Typ.	Max.
IRP(850nm)	TK0124IRP	AlGaAs/AlGaAs	P	610	175	5.0~7.0	850	1.50
	TK0132IRP	AlGaAs/AlGaAs	P	610	175	5.2~7.2	850	1.50
	TK0140IRP	AlGaAs/AlGaAs	P	1015	175	5.8~8.6	850	1.50
	TK0160IRP	AlGaAs/AlGaAs	P	1520	175	6.2~8.8	850	1.45
	TK0H40IRP	AlGaAs/AlGaAs	P	1015	175	6.2~8.8	850	1.50
	TK0H60IRP	AlGaAs/AlGaAs	P	1520	175	6.5~9.0	850	1.45
	TK0N12IRP	AlGaAs/AlGaAs	N	300	175	3.6~4.8	850	1.65
	TK0N14IRP	AlGaAs/AlGaAs	N	350	175	3.8~5.2	850	1.60
	TK0N40IRP	AlGaAs/AlGaAs	N	1015	175	4.0~5.8	850	1.50

Infrared LED



(주)에이스 로얄테크
ACE Royal Tech Inc.

LPE TYPE

Wp(nm)	Part no.	Material	Top Polarity	Size (um)	Thickness (um)	Po(mW)	Wp(nm)	VF(V)
						Typ	Typ.	Max.
IRS(870nm)	TK0112IRS	AlGaAs/AlGaAs	P	300	175	3.5~4.5	865	1.65
	TK0114IRS	AlGaAs/AlGaAs	P	350	175	3.6~4.8	865	1.60
	TK0116IRS	AlGaAs/AlGaAs	P	400	175	3.8~5.0	865	1.55
	TK0N14IRS	AlGaAs/AlGaAs	N	350	175	3.8~5.0	865	1.55
	TK0214IRS	AlGaAs/AlGaAs	N	350	175	3.2~4.6	880	1.55
IRQ(890nm)	TK0114IRQ	AlGaAs/AlGaAs	P	350	170	2.8~3.8	890	1.45
IRP(890nm)	TK0211IRP	AlGaAs/AlGaAs	N	275	200	1.3~1.8	890	1.55
	TK0213IRP	AlGaAs/AlGaAs	N	325	200	1.5~2.1	890	1.50
	TK0214IRP	AlGaAs/AlGaAs	N	350	200	1.5~2.1	890	1.50
	TK0216IRP	AlGaAs/AlGaAs	N	400	200	1.6~2.2	890	1.45

Infrared LED



(주)에이스 로얄테크
ACE Royal Tech Inc.

LPE TYPE

Wp(nm)	Part no.	Material	Top Polarity	Size (um)	Thickness (um)	Po(mW)	Wp(nm)	VF(V)
						Typ	Typ.	Max.
IRN(900nm)	TK0114IRN	AlGaAs/AlGaAs	P	350	160	3.6~4.6	900	1.45
IRN(900nm)	TK0N14IRN	AlGaAs/AlGaAs	N	350	170	2.4~3.5	900	1.55
IRF(910nm)	TK0N14IRF	AlGaAs/AlGaAs	N	350	170	2.8~3.8	910	1.60
IRA(940nm)	TK0109IRA	AlGaAs/GaAs	P	225	250	1.4~1.9	940	1.30
	TK0111IRA	AlGaAs/GaAs	P	275	250	1.6~2.1	940	1.30
	TK0112IRA	AlGaAs/GaAs	P	300	250	1.8~2.2	940	1.75
	TK0114IRA	AlGaAs/GaAs	P	350	250	1.9~2.4	940	1.65
	TK0116IRA	AlGaAs/GaAs	P	400	250	1.9~2.5	940	1.65
	TK0124IRA	AlGaAs/GaAs	P	610	250	2.0~2.6	940	1.60
	TK0140IRA	AlGaAs/GaAs	P	1015	250	2.1~2.7	940	1.60
	TK0H40IRA	AlGaAs/GaAs	P	1015	250	2.2~2.8	940	1.60

Infrared LED



(주)에이스 로얄테크
ACE Royal Tech Inc.

LPE TYPE

Wp(nm)	Part no.	Material	Top Polarity	Size (um)	Thickness (um)	Po(mW)	Wp(nm)	VF(V)
						Typ	Typ.	Max.
IRG(940nm)	TK0108IRG	GaAs/GaAs	P	225	225	0.7~1.3	940	1.35
	TK0109IRG	GaAs/GaAs	P	225	225	0.8~1.4	940	1.30
	TK0A09IRG	GaAs/GaAs	P	225	225	1.0~1.4	940	1.30
	TK0110IRG	GaAs/GaAs	P	250	250	0.9~1.5	940	1.30
	TK0111IRG	GaAs/GaAs	P	275	250	1.0~1.6	940	1.30
	TK0112IRG	GaAs/GaAs	P	300	250	1.0~1.6	940	1.30
	TK0114IRG	GaAs/GaAs	P	350	250	1.1~1.6	940	1.30

Infrared LED



(주)에이스 로얄테크
ACE Royal Tech Inc.

MOCVD TYPE

Wp(nm)A	Part no.	Material	Top Polarity	Size (um)	Thickness (um)	Po(mW)	Wp(nm)	VF(V)
						Typ	Typ.	Max.
IRA(950nm)	TK0607IRA	AlGaAs/GaAs	P	175	180	1.5	950	1.35
	TK0609IRA	AlGaAs/GaAs	P	215	180	1.9	950	1.35
	TK609IRAS	AlGaAs/GaAs	P	215	100	2.3	950	1.35
	TK0612IRA	AlGaAs/GaAs	P	275	220	2.0	950	1.30
	TK612IRAS	AlGaAs/GaAs	P	275	100	2.4	950	1.30
	TK0614IRA	AlGaAs/GaAs	P	325	220	2.1	950	1.30
	TK614IRAS	AlGaAs/GaAs	P	325	100	2.7	950	1.30

MOCVD TYPE is design for high speed and thinner package application

T;031-905-0968 / 070-8018-4191 F; 02-6230-9269 E-mail ; marketing@aceroyal.co.kr <http://www.aceroyal.co.kr>

Infrared LED



(주)에이스 로얄테크
ACE Royal Tech Inc.

Wafer Bond TYPE

Wp(nm)	Part no.	Material	Top Polarity	Size (um)	Thickness (um)	Po(mW)	Wp(nm)	VF(V)
						Min	Typ.	Max.
730 nm	TK0514IRD	AlGaAs/Si	N	350	170	26	735	2.0
750 nm	TK0514IRC	AlGaAs/Si	N	350	170	36	755	2.0
810 nm	TK0514IRV	AlGaAs/Si	N	350	170	36	820	1.9
830 nm	TK0514IRK	AlGaAs/Si	N	350	170	36	830	1.8
850 nm	TK0510IRP	AlGaAs/Si	N	250	170	6	850	1.8
	TK0514IRP	AlGaAs/Si	N	350	170	40	850	1.8
	TK0520IRP	AlGaAs/Si	N	500	170	100	850	1.9
	TK0524IRP	AlGaAs/Si	N	600	170	140	850	1.9
	TK0528IRP	AlGaAs/Si	N	700	170	150	850	1.9
	TK0535IRP	AlGaAs/Si	N	875	170	150	850	1.8
	TK0538IRP	AlGaAs/Si	N	950	170	200	850	1.8
	TK0542IRP	AlGaAs/Si	N	1050	170	200	850	1.8

Infrared LED



(주)에이스 로얄테크
ACE Royal Tech Inc.

Wafer Bond TYPE

Wp(nm)	Part no.	Material	Top Polarity	Size (um)	Thickness (um)	Po(mW)	Wp(nm)	VF(V)
						Min	Typ.	Max.
880 nm	TK0512IRS	AlGaAs/Si	N	300	170	32	885	1.9
	TK0514IRS	AlGaAs/Si	N	350	170	36	885	1.8
910 nm	TK0514IRF	AlGaAs/Si	N	350	170	40	910	1.8
940 nm	TK0508IRA	AlGaAs/Si	N	200	170	4	940	1.7
	TK0510IRA	AlGaAs/Si	N	250	170	5	940	1.7
	TK0514IRA	AlGaAs/Si	N	350	170	40	945	1.7
	TK0520IRA	AlGaAs/Si	N	500	170	100	955	1.9
	TK0524IRA	AlGaAs/Si	N	600	170	120	955	1.8
	TK0528IRA	AlGaAs/Si	N	700	170	120	955	1.8
	TK0535IRA	AlGaAs/Si	N	875	170	140	950	1.7
	TK0538IRA	AlGaAs/Si	N	950	170	180	945	1.7