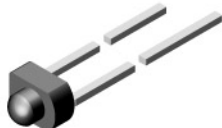
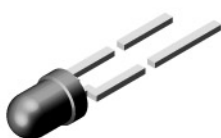

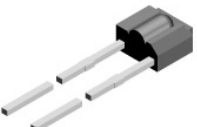
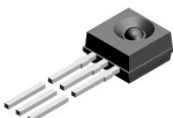
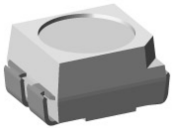



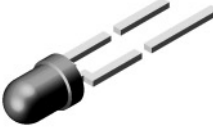

Infrared Emitters


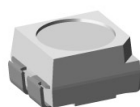
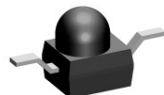


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PRODUCT DESCRIPTION	TYPE	ANGLE $\pm\phi$ (°)	SPEED t_r, t_f (ns)	RADIANT INTENSITY I_e (mW/sr)	AT I_F (mA)	FORWARD VOLTAGE (V_F)	AT I_F (mA)	REMARKS
1.8 mm T 3/4 Lens Package Standard GaAs Emitters (950 nm) 400 ns 	CQY36N	40	400	1.5 (>0.7)	50	1.2 (<1.6)	50	Plastic
	CQY37N	12	400	5 (>2.2)	50	1.2 (<1.6)	50	Plastic
3 mm T1 Standard Package Standard GaAs Emitters (950 nm) 400 ns 	TSUS4300	16	400	18 (>7)	100	1.3 (<1.7)	100	Plastic
	TSUS4400	18	400	15 (>7)	100	1.3 (<1.7)	100	Plastic
5 mm T 1 3/4 Standard Package Standard GaAs Emitters (950 nm) 400 ns 	TSUS5200	15	400	20 (>10)	100	1.3 (<1.7)	100	Plastic
	TSUS5201	15	400	25 (>15)	100	1.3 (<1.7)	100	Plastic
	TSUS5202	15	400	30 (>20)	100	1.3 (<1.7)	100	Plastic
	TSUS5400	22	400	14 (>7)	100	1.3 (<1.7)	100	Plastic
	TSUS5401	22	400	17 (>10)	100	1.3 (<1.7)	100	Plastic
	TSUS5402	22	400	20 (>15)	100	1.3 (<1.7)	100	Plastic
Side View w Lens Package Standard GaAs Emitters (950 nm) 400 ns 	TSSS2600	25	400	1.5 (>0.6)	50	1.2 (<1.6)	50	Plastic
Side View w Lens 3-pin Package Standard GaAs Emitters (950 nm) 400 ns 	TSKS5400	30	400	2-7	50	1.3 (<1.7)	100	Plastic
	TSKS5400S	30	400	2-7	50	1.3 (<1.7)	100	Plastic
	TSKS5400S-ASZ	30	400	2-7	50	1.3 (<1.7)	100	Plastic

PRODUCT DESCRIPTION	TYPE	ANGLE $\pm\phi$ (°)	SPEED t_r, t_f (ns)	RADIANT INTENSITY I_e (mW/sr)	AT I_F (mA)	FORWARD VOLTAGE (V_F)	AT I_F (mA)	REMARKS
SMD-PLCC2 3-pad Package Standard GaAs Emitters (950 nm) 400 ns 	TSMS3700	60	400	4	100	1.3 (<1.7)	100	PLCC2
TO18 Metal Can Package Standard GaAs Emitters (950 nm) 400 ns 	TSTS7100	5	400	>10	100	1.3 (<1.7)	100	Hermetically sealed
	TSTS7300	12	400	6.3 (>4.0)	100	1.3 (<1.7)	100	Hermetically sealed
	TSTS7500	40	400	1.6 (>1.25)	100	1.3 (<1.7)	100	Hermetically sealed

PRODUCT DESCRIPTION	TYPE	ANGLE $\pm\phi$ (°)	SPEED t_r, t_f (ns)	RADIANT INTENSITY I_e (mW/sr)	AT I_F (mA)	FORWARD VOLTAGE (V_F)	AT I_F (mA)	REMARKS
3 mm T1 Standard Package Extended Power GaAlAs/GaAs Emitters (950 nm) 800 ns 	TSAL4400	25	800	30 (>16)	100	1.35(<1.8)	100	Plastic
5 mm T 1 3/4 Standard Package Extended Power GaAlAs/GaAs Emitters (950 nm) 800 ns 	TSAL5100	10	800	130 (>80)	100	1.35(<1.8)	100	Plastic
	TSAL5300	22	800	40 (>30)	100	1.35(<1.8)	100	Plastic

PRODUCT DESCRIPTION	Type	ANGLE $\pm\phi$ (°)	SPEED t_r, t_f (ns)	RADIANT INTENSITY I_e (mW/sr)	AT I_F (mA)	FORWARD VOLTAGE (V_F)	AT I_F (mA)	REMARKS
5 mm T 1 3/4 Standard Package Extended Power GaAIAs/GaAs Emitters (950 nm) 800 ns 	TSAL6100	10	800	130 (>80)	100	1.35(<1.8)	100	Plastic
	TSAL6200	17	800	60 (>40)	100	1.35(<1.8)	100	Plastic
	TSAL6400	25	800	35 (>25)	100	1.35(<1.8)	100	Plastic
	TSAL7200	17	800	60 (>40)	100	1.35(<1.8)	100	Plastic
	TSAL7300	22	800	45 (>30)	100	1.35 (<1.6)	100	Plastic
	TSAL7400	25	800	35 (>25)	100	1.35(<1.8)	100	Plastic
	TSAL7600	30	800	25 (>15)	100	1.35 (<1.6)	100	Plastic
SMD-PLCC2 3-pad Package Extended Power GaAIAs/GaAs Emitters (950 nm) 500 ns 	TSML3700	60	500	7 (>2.5)	100	1.35 (<1.6)	100	PLCC2
	TSML3710	60	500	8 (>4.0)	100	1.35 (<1.6)	100	PLCC2
SMD T3/4 Rev. Gull Wing Package Extended Power GaAIAs/GaAs Emitters (950 nm) 800 ns 	TSML1000	12	800	35	100	1.35 (<1.6)	100	SMD with Dome Lens
SMD T3/4 Gull Wing Package Extended Power GaAIAs/GaAs Emitters (950 nm) 800 ns 	TSML1020	12	800	35	100	1.35 (<1.6)	100	SMD with Dome Lens
SMD T3/4 Yoke Package Extended Power GaAIAs/GaAs Emitters (950 nm) 800 ns 	TSML1030	12	800	35	100	1.35 (<1.6)	100	SMD with Dome Lens


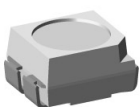
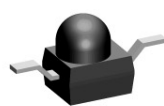


PRODUCT DESCRIPTION	Type	ANGLE $\pm\phi$ (°)	SPEED t_r, t_f (ns)	RADIANT INTENSITY I_e (mW/sr)	AT I_F (mA)	FORWARD VOLTAGE (V_F)	AT I_F (mA)	REMARKS
SMD T3/4 Axial Package Extended Power GaAlAs/GaAs Emitters (950 nm) 800 ns 	TSML1040	12	800	35	100	1.35 (<1.6)	100	SMD with Dome Lens


PRODUCT DESCRIPTION	TYPE	ANGLE $\pm\phi$ (°)	SPEED t_r, t_f (ns)	RADIANT INTENSITY I_e (mW/sr)	AT I_F (mA)	FORWARD VOLTAGE (V_F)	AT I_F (mA)	REMARKS
5 mm T 1 3/4 Standard Package High Speed GaAlAs/GaAs/GaAlAs Emitters (870 nm) 10 ns 	TSFF5200	10	10	160 (>80)	100	1.45 (<1.6)	100	Plastic
	TSFF5400	22	10	60 (>35)	100	1.45 (<1.6)	100	Plastic
5 mm T 1 3/4 Standard Package High Speed GaAlAs/GaAs/GaAlAs Emitters (870 nm) 30 ns 	TSHF5200	10	30	60 (>40)	100	1.35 (<1.6)	100	Plastic
	TSHF5400	24	30	40 (>25)	100	1.35 (<1.6)	100	Plastic
	TSPF5400	24	30	45 (>30)	100	1.5 (<1.8)	100	not for new design
5 mm T 1 3/4 Standard Package High Speed GaAlAs/GaAs/GaAlAs Emitters (870 nm) 20 ns 	TSHG6200	10	20	160	100	1.55 (<1.7)	100	Plastic

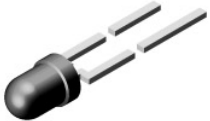

Infrared Emitters

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PRODUCT DESCRIPTION	TYPE	ANGLE $\pm\phi$ (°)	SPEED t_r, t_f (ns)	RADIANT INTENSITY I_e (mW/sr)	AT I_F (mA)	FORWARD VOLTAGE (V_F)	AT I_F (mA)	REMARKS
Side view with Lens Package High Speed GaAlAs/GaAs/GaAlAs Emitters (870 nm) 30 ns 	TSSF4500	22	30	20 (>10)	100	1.35 (<1.6)	100	Plastic
SMD-PLCC2 3-pad Package High Speed GaAlAs/GaAs/GaAlAs Emitters (870 nm) 30 ns 	TSMF3700	60	30	7	100	1.4 (<1.7)	100	PLCC2
SMD T3/4 Rev. Gull Wing Package High Speed GaAlAs/GaAs/GaAlAs Emitters (870 nm) 30 ns 	TSMF1000	17	30	5	20	1.3 (<1.5)	20	SMD with Dome Lens
SMD T3/4 Gull Wing Package High Speed GaAlAs/GaAs/GaAlAs Emitters (870 nm) 30 ns 	TSMF1020	17	30	5	20	1.3 (<1.5)	20	SMD with Dome Lens
SMD T3/4 Yoke Package High Speed GaAlAs/GaAs/GaAlAs Emitters (870 nm) 30 ns 	TSMF1030	17	30	5	20	1.3 (<1.5)	20	SMD with Dome Lens

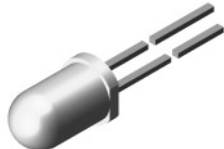

PRODUCT DESCRIPTION	TYPE	ANGLE $\pm\phi$ (°)	SPEED t_r, t_f (ns)	RADIANT INTENSITY I_e (mW/sr)	AT I_F (mA)	FORWARD VOLTAGE (V_F)	AT I_F (mA)	REMARKS
SMD T3/4 Axial Package High Speed GaAlAs/GaAs/GaAlAs Emitters (870 nm) 30 ns 	TSMF1040	17	30	5	20	1.3 (<1.5)	20	SMD with Dome Lens

PRODUCT DESCRIPTION	TYPE	ANGLE $\pm\phi$ (°)	SPEED t_r, t_f (ns)	RADIANT INTENSITY I_e (mW/sr)	AT I_F (mA)	FORWARD VOLTAGE (V_F)	AT I_F (mA)	REMARKS	PACKAGE DESCRIPTION
3 mm T1 Standard Package High Performance GaAlAs Emitters (870 nm) 300 ns 	TSHA4400	20	300	20 (>12)	100	1.5 (<1.8)	100	Plastic	Lens 3 mm
	TSHA4401	20	300	30 (>16)	100	1.5 (<1.8)	100	Plastic	Lens 3 mm
5 mm T 1 3/4 Standard Package High Performance GaAlAs Emitters (870 nm) 300 ns 	TSHA5200	12	300	40 (>25)	100	1.5 (<1.8)	100	Plastic	Lens 5 mm
	TSHA5201	12	300	50 (>30)	100	1.5 (<1.8)	100	Plastic	Lens 5 mm
	TSHA5202	12	300	60 (>36)	100	1.5 (<1.8)	100	Plastic	Lens 5 mm
	TSHA5203	12	300	65 (>50)	100	1.5 (<1.8)	100	Plastic	Lens 5 mm
	TSHA5500	24	300	20 (>12)	100	1.5 (<1.8)	100	Plastic	Lens 5 mm
	TSHA5501	24	300	25 (>16)	100	1.5 (<1.8)	100	Plastic	Lens 5 mm
	TSHA5502	24	300	30 (>20)	100	1.5 (<1.8)	100	Plastic	Lens 5 mm
TSHA5503	24	300	35 (>24)	100	1.5 (<1.8)	100	Plastic	Lens 5 mm	

Infrared Emitters

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PRODUCT DESCRIPTION	TYPE	ANGLE $\pm\phi$ (°)	SPEED t_r, t_f (ns)	RADIANT INTENSITY I_e (mW/sr)	AT I_F (mA)	FORWARD VOLTAGE (V_F)	AT I_F (mA)	REMARKS	PACKAGE DESCRIPTION
5 mm T 1 3/4 Standard Package High Performance GaAIAs Emitters (870 nm) 300 ns 	TSHA6200	12	300	40 (>25)	100	1.5 (<1.8)	100	Plastic	Lens 5 mm
	TSHA6201	12	300	50 (>30)	100	1.5 (<1.8)	100	Plastic	Lens 5 mm
	TSHA6202	12	300	60 (>36)	100	1.5 (<1.8)	100	Plastic	Lens 5 mm
	TSHA6203	12	300	65 (>50)	100	1.5 (<1.8)	100	Plastic	Lens 5 mm
	TSHA6500	24	300	20 (>12)	100	1.5 (<1.8)	100	Plastic	Lens 5 mm
	TSHA6501	24	300	25 (>16)	100	1.5 (<1.8)	100	Plastic	Lens 5 mm
	TSHA6502	24	300	30 (>20)	100	1.5 (<1.8)	100	Plastic	Lens 5 mm
	TSHA6503	24	300	35 (>24)	100	1.5 (<1.8)	100	Plastic	Lens 5 mm
TO18 Metal Can Package High Performance GaAIAs Emitters (870 nm) 500 ns 	TSTA7100	5	500	50 (>20)	100	1.4 (<1.8)	100	Hermetically sealed	TO18 Metal
	TSTA7300	12	500	20 (>10)	100	1.4 (<1.8)	100	Hermetically sealed	TO18 Metal
	TSTA7500	40	500	6 (>3.2)	100	1.4 (<1.8)	100	Hermetically sealed	TO18 Metal