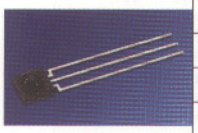
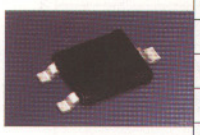
1. Foto IC für Fernsteuerung

T_A = 25 °C

1. Photo IC for Remote Control

T_A = 25 °C

Gehäuse Package	Typ Type	Frequenz Frequency f kHz	Halbwinkel Halfangle φ deg.	Min. Bestrahlungsstärke [1] Min. threshold irradiance $E_{e\,min}$ mW/m²	Ordering code	Fig.
	**SFH 5110-30**	30	± 50 horizontal ± 30 vertical	0.35 typ., 0.5 max.	Q62702-P5088	1
	SFH 5110-33	33			Q62702-P5089	
	SFH 5110-36	36			Q62702-P5090	
	SFH 5110-38	38			Q62702-P5091	
	SFH 5110-40	40			Q62702-P5092	
	SFH 5111-30	30	± 50 horizontal ± 30 vertical	0.35 typ., 0.5 max.	Q62702-P5257	
	SFH 5111-33	33			Q62702-P5258	
	SFH 5111-36	36			Q62702-P5259	
	SFH 5111-38	38			Q62702-P5260	
	SFH 5111-40	40			Q62702-P5261	
	**SFH 5410**	30	± 60 horizontal ± 60 vertical	1.4 typ., 2.0 max.	on request	
	SFH 5410	33			on request	
	SFH 5410	36			Q65110A 354	
	SFH 5410	38			on request	
	SFH 5410	40			Q65110A 151	

[1] In Verbindung mit einer SFH 4510/4515 bei Betrieb mit I_F = 500 mA wird eine Reichweite von ca. 30 m erreicht.
Together with an IRED SFH 4510/4515 under operating conditions I_F = 500 mA an arrival distance of 30 m is possible.

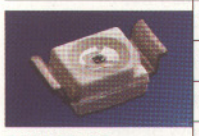
2. Fotodetektoren in SMT (Oberflächenmontage)

T_A = 25 °C

2. Photodetectors in SMT (Surface Mount Technology)

T_A = 25 °C

Package	Type	φ deg.	Radiant sensitive area mm²	I_{PCE} (λ = 950 nm, E_e = 0.1 mW/cm², V_{CE} = 5 V) µA	V_{CEO} V	$\lambda_{10\%}$ nm	t_r, t_f (I_C = 1 mA, V_{CC} = 5 V, R_L = 1 kΩ) µs	Ordering code	Fig.
2.1 SMT-Transistoren								**2.1 SMT-Transistors**	
 SMARTLED	**SFH 3010**	± 80	0.02	>25 (Ee = 0.5 mW/cm²)	15 30 (t < 2 mn)	420 ... 1100	7	Q62702-P5555	69
 TOPLED	**SFH 320**	± 60	0.045	≥16	35		–	Q62702-P961	2
	SFH 320-3			25 ... 50			7	Q62702-P390	
	SFH 320-3/4			25 ... 80			7/8	Q62702-P3602	
	SFH 320-4			40 ... 80			8	Q62702-P1606	
 TOPLED mit Linse	**SFH 3219**	± 25		≥ 63		430...1150	7	Q62702-P5551	67

Package	Type	φ deg.	Radiant sensitive area mm²	I_{PCE} (λ = 950 nm, E_e = 0.1 mW/cm², V_{CE} = 5 V) µA	V_{CEO} V	$\lambda_{10\%}$ nm	t_r, t_f (I_C = 1 mA, V_{CC} = 5 V, R_L = 1 kΩ) µs	Ordering code	Fig.
2.1 SMT-Transistoren									
 **TOPLED**	**SFH 320 FA**	± 60	0.045	≥ 16	35	740 ... 1100	–	Q62702-P988	2
	SFH 320 FA-3			25 ... 50			7	Q62702-P393	
	SFH 320 FA-3/4			25 ... 80			7/8	Q62702-P3601	
	SFH 320 FA-4			40 ... 80			8	Q62702-P1607	
 **TOPLED RG**	**SFH 3211**	± 60	0.045	≥ 16	35	420 ... 1100	8	Q62702-P5127	3
	SFH 3211-3			25 ... 50				on request	
	SFH 3211-3/4			25 ... 80				on request	
	SFH 3211-4			40 ... 80				on request	
 **TOPLED RG**	**SFH 3211 FA**	± 60	0.045	≥ 16	35	740 ... 1100	–	on request	3
	SFH 3211 FA-3			25 ... 50			7	on request	
	SFH 3211 FA-3/4			25 ... 80			7/8	on request	
	SFH 3211 FA-4			40 ... 80			8	on request	
 **SIDELED**	**SFH 325**	± 60	0.045	≥ 16	35	420 ... 1100	–	Q62702-P1638	4
	SFH 325-3			25 ... 50			7	Q62702-P1610	
	SFH 325-3/4			25 ... 80			7/8	Q62702-P3604	
	SFH 325-4			40 ... 80			8	Q62702-P1611	
 **SIDELED**	**SFH 325 FA**	± 60	0.045	≥ 16	35	740 ... 1100	–	Q62702-P1639	
	SFH 325 FA-3			25 ... 50			7	Q62702-P1614	
	SFH 325 FA-3/4			25 ... 80			7/8	Q62702-P3603	
	SFH 325 FA-4			40 ... 80			8	Q62702-P1615	

2.1 SMT-Transistors (cont'd)

Package	Type	Sender Emitter	λ_{peak} nm	φ deg.	I_V mcd	I_e mW/sr	V_F V		Ordering code	Fig.
 Multi TOPLED	SFH 331-JK		635	± 60	4...12.5	–	2.0	at I_F = 20 mA	Q62702-P1634	5
		Empfänger Detector	Radiant sensitive area mm²	I_{PCE} (λ = 950 nm, E_e = 0.1 mW/cm², V_{CE} = 5 V) µA	V_{CEO} V		$\lambda_{10\%}$ nm	t_r,t_f (I_C = 1 mA, V_{CC} = 5 V, R_L = 1 kΩ) µs		
			0.045	≥16	35		380... 1150	7		

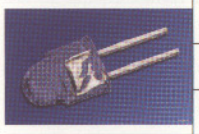
Package	Type	Sender Emitter	λ_{peak} nm	φ deg.	I_V mcd	I_e mW/sr	V_F V		Ordering code	Fig.
 Multi TOPLED	SFH 7221		880	± 60	–	4	1.5	at I_F = 20 mA	Q62702-P1819	6
		Empfänger Detector	Radiant sensitive area mm²	I_{PCE} (λ = 950 nm, E_e = 0.1 mW/cm², V_{CE} = 5 V) µA	V_{CEO} V		$\lambda_{10\%}$ nm	t_r,t_f (I_C = 1 mA, V_{CC} = 5 V, R_L = 1 kΩ) µs		
			0.045	≥16	35		380... 1150	7		

Package	Type	Sender Emitter	λ_{peak} nm	φ deg.	I_V mcd	V_F V		Ordering code	Fig.
 Multi TOPLED	SFH 7225		591	± 60	125 typ.	2.0	at I_F = 20 mA	Q62702-P5319	5
		Empfänger Detector	Radiant sensitive area mm²	I_{PCE} (E_v = 1000 lx Standard light A V_{CE} = 5 V) µA	V_{CEO} V	Crosstalk I_{PCE} (I_F = 20 mA, V_{CE} = 5 V) µA			
			0.045	650 typ.	35	850 typ.			

Package	Type	Sender Emitter	λ_{peak} nm	φ deg.	I_V mcd	V_F V		Ordering code	Fig.
 Multi TOPLED	SFH 7226		645	± 60	70 typ.	2.0	at I_F = 20 mA	Q62702-P5320	5
		Empfänger Detector	Radiant sensitive area mm²	I_{PCE} (E_v = 1000 lx Standard light A V_{CE} = 5 V) µA	V_{CEO} V	Crosstalk I_{PCE} (I_F = 20 mA, V_{CE} = 5 V) µA			
			0.045	650 typ.	35	850 typ.			

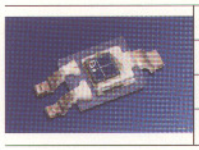
2.1 SMT-Transistoren

2.1 SMT-Transistors (cont'd)

Package	Type	φ deg.	Radiant sensitive area mm²	I_{PCE} (λ = 950 nm, V_{CE} = 5 V) mA		V_{CEO} V	$\lambda_{10\%}$ nm	t_r,t_f (I_C = 1 mA, V_{CC} = 5 V, R_L = 1 kΩ) µs	Ordering code	Fig.
	**SFH 3500**	± 13	0.55	2.5 ... 20.0	E_e = 0.5 mW/cm²	35	450 ... 1060	–	Q62702-P5031	7
	SFH 3500-3/4			2.5 ... 8.0				14/17	Q62702-P5205	
	SFH 3500-5/6			6.3 ... 20.0				20/24	Q62702-P5206	
	**SFH 3505**	± 13	0.55	2.5 ... 20.0		35	450 ... 1060	–	Q62702-P5050	8
	SFH 3505-3/4			2.5 ... 8.0				14/17	Q62702-P5207	
	SFH 3505-5/6			6.3 ... 20.0				20/24	Q62702-P5208	
	**SFH 3500 FA**	± 13	0.55	2.5 ... 20.0		35	740 ... 1070	–	Q62702-P5032	7
	SFH 3500 FA-3/4			2.5 ... 8.0				14/17	Q62702-P5201	
	SFH 3500 FA-5/6			6.3 ... 20.0				20/24	Q62702-P5202	
	**SFH 3505 FA**	± 13	0.55	2.5 ... 20.0		35	740 ... 1070	–	Q62702-P5051	8
	SFH 3505 FA-3/4			2.5 ... 8.0				14/17	Q62702-P5203	
	SFH 3505 FA-5/6			6.3 ... 20.0				20/24	Q62702-P5304	
	**SFH 3400**	± 60	0.55	0.063 ... 0.32	E_e = 0.1 mW/cm²	20 70 (t < 2 min.)	460 ... 1080	–	Q62702-P1796	9
	SFH 3400-2/3			0.1 ... 0.32				24/34	Q62702-P3605	
	SFH 3401 (mit Basisanschluß/ with base connection)	± 60	0.55	0.063 ... 0.32		20 70 (t < 2 min.)	460 ... 1080	–	Q62702-P5014	10
	SFH 3401-2/3			0.1 ... 0.32				24/34	Q62702-P5200	
	**SFH 3201**	± 60	0.55	0.063 ...0.32		20 70 (t < 2 min.)	460 ... 1080	–	Q62702-P5043	11
	SFH 3201-2/3			0.1 ... 0.32				24/34	Q62702-P5209	

SMT-Transistor (V_λ - Kurve)

SMT-Transistor (V_λ - Curve)

	**SFH 3410**	± 60	0.29	>0.0032	E_V = 20 Lx	5.5	350 ... 970	–	Q62702-P5160	12
	SFH 3410-1/2			0.0032-0.010					Q6511-0A49	
	SFH 3410-2/3			0.005 -0.016					Q6511-0A50	
	SFH 3410-3/4			0.008 -0.025					Q6511-0A51	