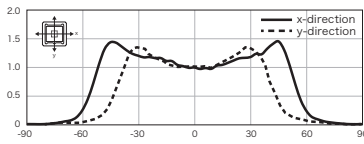
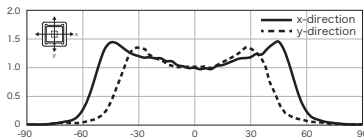
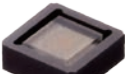
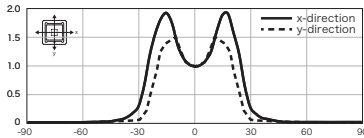




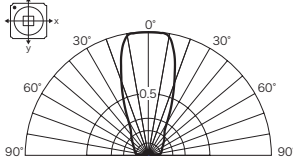
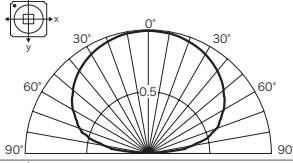
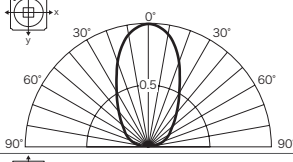
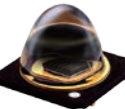
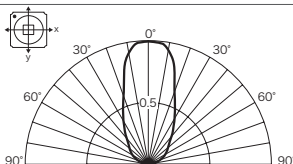
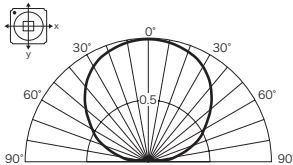
Ta=25℃

IR VCSELs

パッケージ Package	品名 Part name	電気的光学的特性／Electro-optical characteristics									熱的特性／ Thermal characteristics		絶対最大定格／Absolute maximum ratings							標準梱包 数量 Standard qty. /Reel	WEB
		ピーク発光波長 Peak wavelength λp Typ.	光出力 Optical output power Po Min. Typ.		応答速度 Response time tr/τf Typ.	順電圧 Forward voltage VF Typ. Max.		照射角度 Field of illumination (FOI x / y)	指向特性 Spatial distribution	選別電流 Sorting current IF	熱抵抗 [ジャンクション-はんだ付け位置] Thermal resistance [Junction - solder point] Rth(J-a) Typ. Max.		VCSEL			フォトダイオード／Photodiode		動作温度 Operating temperature Topr	保存温度 Storage temperature Tstg		
			順電流 Forward current IF	パルス順電流 Pulse forward current IFRM ※1		ジャンクション温度 Junction temperature Tj	静電耐圧 Electrostatic discharge threshold (HBM) VESD				逆電圧 Reverse voltage VR										
単位 (Units)		nm	W		ns	V		deg.	-	mA	℃/W		mA	mA	℃	kV	V	℃	℃	pcs.	
 44.5mg	UEN1ZEA9 (with Photodiode type)	940	2.4	2.8	1 / 1	2.1	2.5	110 / 85		4,000 (tw=0.3ms)	10	-	2,000	10,000 (tw=0.1ms, duty=1%)	125	2	5	-40～+125	-40～+125	500	
 44.5mg	UEN1ZA9	940	2.4	2.8	1 / 1	2.1	2.5	110 / 85		4,000 (tw=0.3ms)	10	-	2,000	10,000 (tw=0.1ms, duty=1%)	125	-	-	-40～+125	-40～+125	500	
 44.5mg	UDN1Z54	940	1.6	2.1	1 / 1	2.1	2.6	54 / 43		2,700 (tw=0.3ms)	10	-	2,000	6,000 (tw=0.1ms, duty=1%)	125	-	-	-40～+125	-40～+125	500	

※製品画像は代表的なものです / All pictures shown are for illustration purposes only. Actual product may vary due to product enhancement.
※1 駆動条件 / Driving conditions : 0.3ms pulse ※2 駆動条件 / Driving conditions : 0.1ms pulse, 1/100 duty

IR LEDs

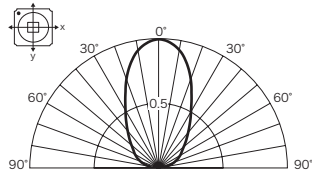
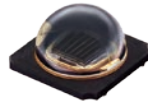
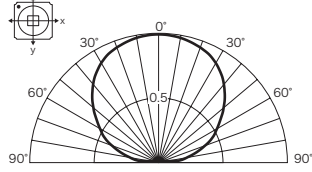
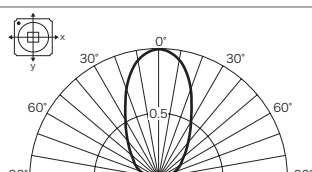
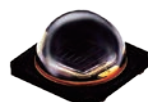
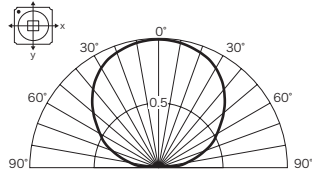
パッケージ Package	品名 Part name	電気的光学的特性 / Electro-optical characteristics										熱的特性 / Thermal characteristics		絶対最大定格 / Absolute maximum ratings								標準梱包 数量 Standard qty. /Reel	WEB			
		ピーク発光波長 Peak wavelength λp Typ.	放射強度 Radiant intensity Ie Min. Typ.		放射束 Radiant flux φe Typ.	遮断周波数 Cut-off frequency fc Typ.	応答速度 Response time tr / tf Typ.	順電圧 Forward voltage VF Typ. Max.		指向半値角 Half-intensity angle 2θ1/2 (θx / θy)	指向特性 Spatial distribution	選別電流 Sorting current IF	熱抵抗 【ジャンクション-はんだ付け位置】 Thermal resistance 【Junction - solder point】 Rth(j-a) Typ. Max.		順電流 Forward current IF	順電流低減率 Forward current decrease rate ΔIF Derating start temp.		パルス順電流 Pulse forward current IFRM ※1	パルス順電流低減率 Pulse forward current decrease rate※1 ΔIFRM Derating start temp.		ジャンクション温度 Junction temperature Tj			動作温度 Operating temperature Topr	保存温度 Storage temperature Tstg	
			nm	mW/sr				mW	MHz				ns	V		deg.	-		mA	℃/W						mA
L3.8 x W3.8 x H3.2  34mg	VMNN110CMS	945	890	1,160	1,700	—	15 / 15	2.9	3.3	45 / 45			1,000	5	7	1,000	—	—	5,000	—	—	145	−40〜+125	−40〜+125	500	
L3.8 x W3.8 x H1.7  23mg	VMNN110FMS	945	275	350	1,700	—	—	2.9	3.3	150 / 150			1,000	5	7	1,000	—	—	5,000	—	—	145	−40〜+125	−40〜+125	500	
L3.8 x W3.8 x H2.8  28mg	VMHN1107MS	945	620	750	1,630	—	15 / 15	2.9	3.2	60 / 60			1,000	5	7	1,000	—	—	5,000※2	—	—	145	−40〜+125	−40〜+125	500	
	VMFN1107MS	945	280	440	950	—	15 / 15	1.5	2.1	60 / 60			1,000	5	7	1,000	—	—	5,000	—	—	125	−40〜+125	−40〜+125	500	
	VMGN1107MS	855	390	530	1,100	—	15 / 15	1.8	2.4	60 / 60			1,000	5	7	1,000	—	—	5,000	—	—	125	−40〜+125	−40〜+125	500	
L3.8 x W3.8 x H2.8  28mg	VMKN1107MS	810	390	600	1,100	—	—	3.2	3.7	50 / 50			700	6.5	8.5	700	—	—	2,000	—	—	125	−40〜+125	−40〜+125	500	
L3.8 x W3.8 x H2.1  26mg	VMNN1108MS	945	330	470	1,700	—	15 / 15	2.9	3.3	120 / 120			1,000	5	7	1,000	—	—	5,000	—	—	145	−40〜+125	−40〜+125	500	
	VMHN1108MS	945	310	420	1,650	—	15 / 15	2.9	3.2	120 / 120			1,000	5	7	1,000	—	—	5,000	—	—	145	−40〜+125	−40〜+125	500	
	VMFN1108MS	945	140	230	950	—	15 / 15	1.5	2.1	120 / 120			1,000	5	7	1,000	—	—	5,000	—	—	125	−40〜+125	−40〜+125	500	
	VMGN1108MS	855	210	280	1,100	—	15 / 15	1.8	2.4	120 / 120			1,000	5	7	1,000	—	—	5,000	—	—	125	−40〜+125	−40〜+125	500	

※製品画像は代表的なものです / All pictures shown are for illustration purposes only. Actual product may vary due to product enhancement.
※1 駆動条件 / Driving conditions : 0.1ms pulse, 1/100 duty ※2 駆動条件 / Driving conditions : 1.25ms pulse, 1/200 duty, Ts=85℃

IR LEDs



Ta=25℃

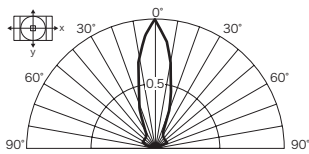
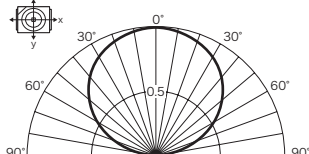
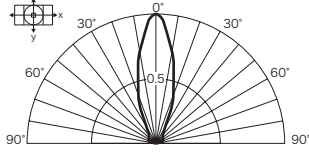
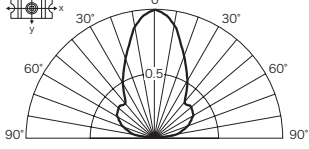
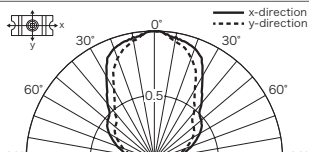
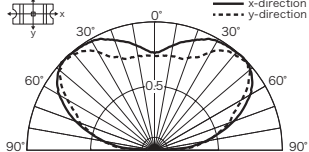
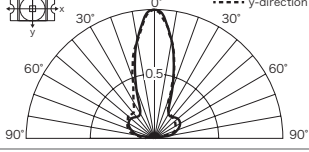
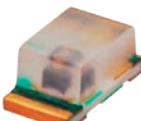
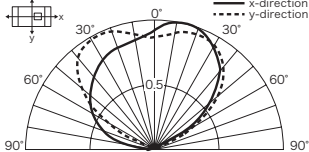
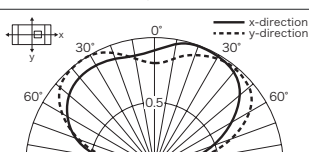
パッケージ Package	品名 Part name	電気的光学的特性／Electro-optical characteristics									熱的特性／Thermal characteristics		絶対最大定格／Absolute maximum ratings					標準梱包 数量 Standard qty. /Reel	WEB		
		ピーク発光波長 Peak wavelength λ _p Typ.	放射強度 Radiant intensity I _e Min. Typ.		放射束 Radiant flux φ _e Typ.	遮断周波数 Cut-off frequency fc Typ.	応答速度 Response time tr/tf Typ.	順電圧 Forward voltage V _F Typ. Max.		指向半値角 Half-intensity angle 2θ _{1/2} (θ _x /θ _y)	指向特性 Spatial distribution	選別電流 Sorting current I _F	熱抵抗 【ジャンクション-はんだ付け位置】 Thermal resistance 【Junction - solder point】 R _{th(J-s)} Typ. Max.		順電流 Forward current I _F	パルス順電流 Pulse forward current I _{FRM} ※1	ジャンクション温度 Junction temperature T _J			動作温度 Operating temperature Topr	保存温度 Storage temperature Tstg
		nm	mW/sr		mW	MHz	ns	V		deg.	-	mA	℃/W		mA	mA	℃			℃	℃
L3.8 x W3.8 x H2.8  28mg	MJN1107MS	855	630	840	1,600	—	—	3.2	3.6	60 / 60		1,000	5	7	1,000	3,000	125	−40〜+125	−40〜+125	500	
	MGN1107MS	855	350	530	1,100	—	15 / 15	1.8	2.4	60 / 60		1,000	5	7	1,500	5,000	125	−40〜+125	−40〜+125	500	
	MFN1107MS	945	250	440	950	—	15 / 15	1.5	2.1	60 / 60		1,000	5	7	1,500	5,000	125	−40〜+125	−40〜+125	500	
L3.8 x W3.8 x H2.1  26mg	MJN1108MS	855	310	440	1,600	—	—	3.2	3.6	120 / 120		1,000	5	7	1,000	3,000	125	−40〜+125	−40〜+125	500	
	MGN1108MS	855	190	280	1,100	—	15 / 15	1.8	2.4	120 / 120		1,000	5	7	1,500	5,000	125	−40〜+125	−40〜+125	500	
	MFN1108MS	945	130	230	950	—	15 / 15	1.5	2.1	120 / 120		1,000	5	7	1,500	5,000	125	−40〜+125	−40〜+125	500	
L3.8 x W3.8 x H2.8  28mg	FWR1107MS	755	270	370	680	—	15 / 15	1.8	2.4	60 / 60		700	5	7	1,000	4,500	125	−40〜+125	−40〜+125	500	
L3.8 x W3.8 x H2.1  26mg	FWR1108MS	755	150	200	740	—	15 / 15	1.8	2.4	120 / 120		700	5	7	1,000	4,500	125	−40〜+125	−40〜+125	500	

※製品画像は代表的なものです/All pictures shown are for illustration purposes only. Actual product may vary due to product enhancement.
※1 駆動条件/Driving conditions : 0.1ms pulse 1/100 duty

IR LEDs



Ta=25°C

パッケージ Package	品名 Part name	電気的光学的特性／Electro-optical characteristics									熱的特性／Thermal characteristics		絶対最大定格／Absolute maximum ratings										標準梱包 数量 Standard qty. /Reel	WEB		
		ピーク発光波長 Peak wavelength λ _p Typ.	放射強度 Radiant intensity I _e		放射束 Radiant flux φ _e Typ.	遮断周波数 Cut-off frequency fc Typ.	応答速度 Response time tr/ta Typ.	順電圧 Forward voltage V _F		指向半値角 Half-intensity angle 2θ _{1/2} (θ _x /θ _y)	指向特性 Spatial distribution	選別電流 Sorting current I _F	熱抵抗 [ジャンクション-はんだ付け位置] Thermal resistance [Junction - solder point] R _{th(j-a)}		順電流 Forward current I _F	順電流低減率 Forward current decrease rate		パルス順電流 Pulse forward current I _{FRM} ※1	パルス順電流低減率 Pulse forward current decrease rate※1 ΔI _{FRM}		Derating start temp.	ジャンクション温度 Junction temperature T _j			動作温度 Operating temperature Topr	保存温度 Storage temperature Tstg
			Min.	Typ.				Typ.	Max.				Typ.	Max.		Typ.	Max.		mA/℃	℃						
単位 (Units)		nm	mW/sr		mW	MHz	ns	V		deg.	-	mA	℃/W		mA	mA/℃	℃	mA	mA/℃	℃	℃	℃	℃	℃	pcs.	
 9.0mg	JGN1105H	850	25	50	30	—	13 / 13	1.45	1.65	30 / 30		50	—	—	120	2.40	60	1,200	24	60	—	−40〜+100	−40〜+100	2,000		
	JFN1105H	950	22.5	45	27	—	13 / 13	1.35	1.65	30 / 30		50	—	—	120	2.40	60	1,200	24	60	—	−40〜+100	−40〜+100	2,000		
 33mg	JGN1104LS	850	5	9.2	35	—	13 / 13	1.5	1.75	120 / 120		50	110	—	100	2.86	85	1,000	28.6	85	120	−40〜+100	−40〜+120	2,000		
	JFN1104LS	950	5	8.5	31	—	13 / 13	1.35	1.65	120 / 120		50	110	—	100	2.86	85	1,000	28.6	85	120	−40〜+100	−40〜+120	2,000		
 7.81mg	TDN1105W-23	870	5.6	11	8.0	50※2	—	1.4	1.65	30 / 30		20	—	—	50	0.67	25	300	4	25	—	−30〜+85	−40〜+100	2,000		
	TAN1105W	940	2.4	4.8	5.7	0.5※3	1,000/1,000	1.22	1.37	30 / 30		20	—	—	50	0.67	25	300	4	25	—	−30〜+85	−40〜+100	2,000		
 7.8mg	HDN1102W	850	2.2	3.2	8.5	20※2	—	1.45	1.8	60 / 60		20	—	—	50	0.67	25	300	4	25	—	−30〜+85	−40〜+100	2,500		
	HAN1102W-1	940	0.7	1	5.7	0.5※3	1,000 / 1,000	1.2	1.4	75 / 90		20	—	—	50	0.67	25	300	4	25	—	−30〜+85	−40〜+100	2,500		
 7.8mg	TDN1101W	870	0.6	1.2	8.5	50※2	—	1.4	1.7	135 / 145		20	—	—	50	0.67	25	300	4	25	—	−30〜+85	−40〜+100	2,500		
 1.4mg	VTAN1116P	940	1.8	2.8	5.2	—	1,000 / 1,000	1.25	1.45	40 / 40		20	—	—	50	1.25	60	300	7.5	60	—	−40〜+85	−40〜+100	3,000		
 1.4mg	TDN1111C	870	1.0	1.3	8.0	50※2	—	1.4	1.7	125 / 125		20	—	—	50	0.67	25	300	4	25	—	−30〜+85	−40〜+100	4,000		
	VTAN1111C	940	0.64	0.7	4.3	—	1,000 / 1,000	1.22	1.37	145 / 145		20	—	—	50	1.25	60	300	7.5	60	—	−40〜+85	−40〜+100	4,000		

※製品画像は代表的なものです/All pictures shown are for illustration purposes only. Actual product may vary due to product enhancement.
※1 駆動条件/Driving conditions : 0.1ms pulse 1/100 duty
※2 駆動条件/Driving conditions : If=20mA_{DC}+10mA_{P-P}, -3dB from 1MHz
※3 駆動条件/Driving conditions : If=20mA_{DC}+10mA_{P-P}, -3dB from 0.1MHz