

ULTRA HIGH POWER INFRARED LED

Stanley infrared LEDs, including the super-intensity, high-speed DN Series, are available in four wavelengths (850, 880, 925 and 950nm) as well as in a wide variety of package types.

A wide variety of photo detector can be accommodated, including phototransistors and pin photodiodes, by selecting the package shape, enabling the ideal light source-receiver combination.

T-41-11
T-41-13

▼DESCRIPTION ON TYPE NO.
AN 305

- Infrared LED

AN: 950nm(GaAs)

BN: 925nm(GaAs)

CN:880nm(GaAlAs)

DN: 850nm(GaAlAs)

● Phototransistor

PS:800nm(Si-Epitaxial) PD:800nm(Si-Epitaxial) Darlington Connection

● Pin Photodiode

PP: 950nm(Si)

● **Optoswitch.**

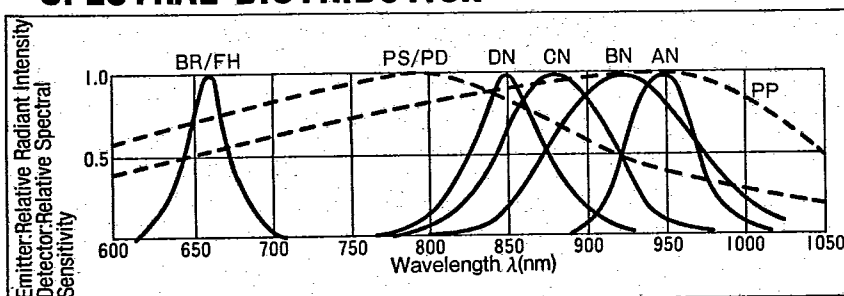
KU: Emitter and detector

▼ CHARACTERISTICS BY WAVELENGTH

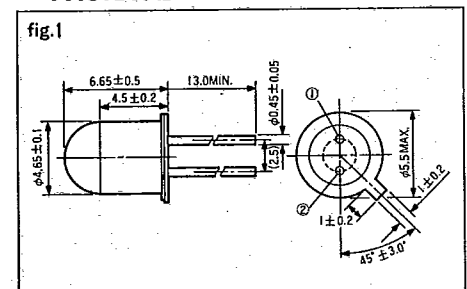
$T_a=25^{\circ}\text{C}$

Type No.		Material	Absolute Maximum Ratings						Electro-Optical Characteristics																		
			Power Dissipation P _d	Forward Current I _F	Peak Forward Current I _{FM}	Reverse Voltage V _R	Operating Temp. T _{opr}	Storage Temp. T _{stg}	Forward Voltage V _F			Reverse Current I _R		Capacitance C _o	Wavelength Peak λ _p Spectral Half Bandwidth Δλ I _F			Cut-off Frequency F _c		Response Time T _r -T _f							
									TYP.	MAX.	I _F	MAX.	V _R		TYP.	Δλ	I _F	TYP.	I _F	TYP.	I _F						
AN	501	GaAs	75	50	500	5	-30~ 85	-30~100	1.3	1.5	50	10	5	20	950	45	50	0.5	50	700	50						
	111																										
	TO-18			1,000	-40~125		-55~125																				
	Others		150	100	-30~ 85		-30~100																				
BN	501	GaAs	60	40	500	4	-30~ 85	-30~100	1.2	1.5	20	10	4	90	925	50	20	1.8	20	200	20						
	TO-18		100	50	1,000		-30~125	-30~125																			
	Others						-30~ 85	-30~100																			
CN	501	GaAlAs	75	50	500	5	-30~ 85	-30~100	1.45	1.8	50	10	5	20	880	65	50	0.65	50	500	50						
	111																										
	TO-18			1,000	-40~125		-55~125																				
	Others		150	100	-30~ 85		-30~100																				
DN	TO-18	GaAlAs	150	100	1,000	5	-40~125	-55~125	1.55	2.0	50	100	5	65	850	40	50	30	50	10	50						
	Others						-30~ 85	-30~100																			
Units			mW	mA		V	°C		V	mA	μA	V	pF	nm	mA	MHz	mA _{DC}	nsec									

▼SPECTRAL DISTRIBUTION



▼ **PACKAGE DIMENSIONS** Unit:mm

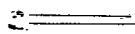
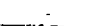


AN, BN, CN, DN TYPE/①: Anode ②: Cathode
PS, PD Type/①: Emitter ②: Collector

ULTRA HIGH POWER INFRARED LED

▼ CHARACTERISTICS BY SHAPE

T-41-11
T-41-13 T_a=25°C

Shape	Type No.	Features	Peak Wavelength λ_p		Radiant Intensity $I_e(P_0)$		Half Intensity Angle $\Delta\theta$	Applications	Fig.
			TYP.	IF	TYP.	IF			
	AN 106	TO-18 can type	950	50	25.0(3.5)	50	4	Optical switches Photosensors	1
	BN 101	High-directivity lens	925	20	6.5(—)	20	12		
	CN 106	High reliability	880	50	30.0(4.5)	50	6		
	DN 106		850	50	70.0(7.0)	50	3		
	AN 202	TO-18 can type	950	50	2.5(4.0)	50	54	Optical switches Photosensors	2
	BN 201	Flat lens	925	20	0.3(—)	20	74	Autofocus mechanisms Photosensors	
	CN 202	High reliability	880	50	3.0(5.0)	50	30		
	DN 202		850	50	4.0(8.0)	50	38		
	AN 111	3-mm dia. ceramic type	950	50	5.0(8.0)	50	110	Photosensors	3
	CN 111	Wide directivity	880	50	5.0(10.0)	50	114		
	AN 303	3-mm dia.	950	50	9.0(5.0)	50	15	Remotecontrol Photosensors	4
	CN 303	Molded epoxy type	880	50	12.0(8.0)	50	20		
	AN 306	Compact	950	50	14.0(5.0)	50	30		5
	CN 306	High directivity	880	50	18.0(7.0)	50	24		
	AN 305	5-mm dia.	950	50	25.0(8.0)	50	18	Remotecontrol/Optical switches	6
	BN 301	Molded epoxy type	925	20	7.0(—)	20	12	Optical switches	7
	CN 305	High directivity	880	50	30.0(8.0)	50	18	Remotecontrol/Optical switches	6
	DN 305		850	50	80.0(12.0)	50	15	Wireless data transmission Remotecontrol	
	AN 304	5-mm dia.	950	50	15.0(9.0)	50	50	Remotecontrol Optical switches	8
	CN 304	Molded epoxy type	880	50	20.0(9.0)	50	35		
	DN 304	Wide directivity	850	50	30.0(15.0)	50	35		
	BN 401	5-mm dia.	925	20	0.8(—)	20	96	Optical switches Autofocus mechanisms	9
	DN 401	Molded epoxy type Flat lens	850	50	7.0(15.0)	50	50		
	BN 511	5-mm dia.	925	20	0.8(—)	20	86	Optical fiber communications	10
	CN 511	Molded epoxy type High accuracy	880	50	6.0(8.0)	50	42		
	DN 511	High input type	850	50	9.0(12.0)	50	28		
	AN 501	1.6-mm dia.	950	50	5.0(6.0)	50	16	Optical switches	11
	BN 501	Axial-lead	925	20	1.5(—)	20	52		
	CN 501	Ultracompact	880	50	6.0(9.0)	50	18		
	BN 504	Side-view type	925	20	1.0(—)	20	100		12
	CN 504	Wide directivity	880	50	5.0(7.0)	50	44		
	AN 505	Side-view type	950	50	4.0(6.0)	50	5		13
	BN 505	High directivity	925	20	1.5(—)	20	26		
	CN 505		880	50	5.0(7.0)	50	7		
Units			nm	mA	mW/sr(mW)	mA	deg.		

▼ **PACKAGE DIMENSIONS** Unit: mm

AN, BN, CN, DN, PP/① : Cathode, ② : Anode
PS, PD/① : Emitter, ② : Collector

