



JOR216D4-D8 Series

Description

The JOR216D4-D8 PhotoRelay consist of a MOSFET、Photoelectric generator optically coupled to an infrared LED 。

Features

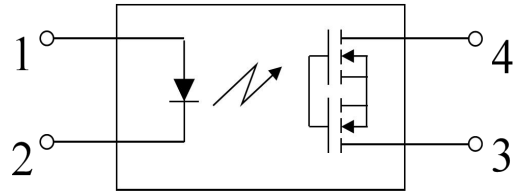
- Normally opened (SPST)
- Control 600V AC or DC voltage
- Switch 40mA load
- Controls low-level analog sings
- High sensitivity, low conductivity resistance
- Low-level off state leakage current
- High isolation voltage 5KV (DIP / SMD)
- Lead free, meet RoHS standards

Applications

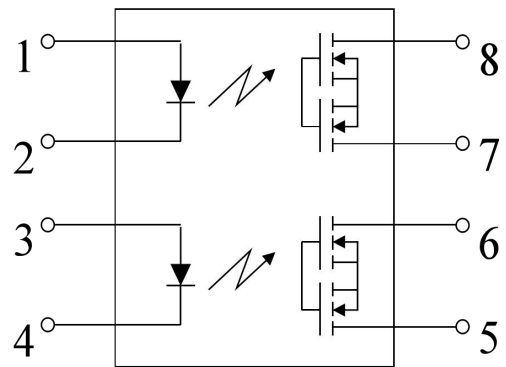
- Communications products (personal computers, laptops)
- Modem/sensor
- Mobile phones/security equipment
- Measuring and testing equipment
- Plant automation equipment
- High-speed inspection machines

600V MOSFET Output Photo Relay

Block Diagram and Package

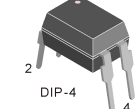
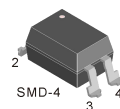


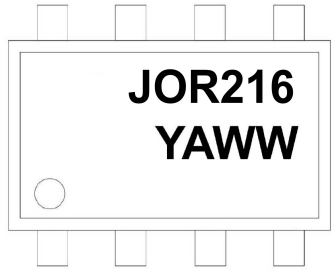

1: Anode (LED)
 2: Cathode (LED)
 3, 4: Drain (MOS FET)



1, 3: Anode (LED)
 2, 4: Cathode (LED)
 5,6,7,8: Drain (MOS FET)

PACKAGE OUTLINE



ORDERING AND MARKING INFORMATION	
MARKING INFORMATION	
	<p>JOR : Company Abbr. 216 : Part Number Y : Fiscal Year A : Manufacturing Code WW : Work Week</p>
ORDERING INFORMATION	LABEL INFORMATION
<p>JOR216(Y)(Z)-G</p>	
<p>JOR – Company Abbr 216 – Part Number Y – Lead Form Option (M/S/SL/None) Z – Tape and Reel Option (T1/T2) G – Green</p>	

Absolute Maximum Ratings (T_A=25°C)

Parameter		Symbol	Rating	Unit	Note
Input	LED Forward Current	I _F	50	mA	
	LED Reverse Voltage	V _R	3	V	
	Peak Forward Current	I _{FP}	1	A	f =100 Hz, Duty factor= 0.1%
	Power Dissipation	P	75	mW	
Output	Load Voltage(peak AC)	V _L	600	V	
	Continuous load current (peak AC)	I _L	0.04	A	
	Peak load current	I _{peak}	0.15	A	100 ms (1 shot), V _L = DC
	Power Dissipation	P _{out}	800 500	mW	DIP8 SMD8 DIP4 SMD4
I/O isolation voltage		V _{iso}	5,000	V _{Rms}	DIP SMD
Temperature limits	Operating	T _{opr}	-40°C ~ + 85°C	°C	Non-condensing at low temp
	Storage	T _{stg}	-40°C ~ + 100°C		

Electro-optical Characteristics (Ta=25°C)

Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit
Input	LED Forward current	I _{Fon}	I _L =0.04A	0.5	1.35	3	mA
	LED turn off current	I _{Foff}	I _L =0.04A	0	1.2	3	mA
	LED dropout voltage	V _F	I _F =5mA	1	1.3	1.4	V
Output	On resistance	R _{on}	I _F =5mA, I _L =0.04A, Within 1 s on time	0	14	20	Ω
	Off state leakage current	I _{Leak}	I _F =0mA, V _L =600V	-100	45	1000	nA
Transfer Characteristics	Turn on time	T _{on}	I _F =5mA, I _L =0.04A	200	500	2000	us
	Turn off time	T _{off}	I _F =5mA, I _L =0.04A	10	170	1000	us
	I/O capacitance	C _{iso}	f=1MHz, V _B =0		0.8	1.5	pF
	Initial I/O isolation resistance	R _{iso}	500V DC	1,000			MΩ

Note: LED forward current recommendation value: I_F=5mA to 10mA

Typical Performance Curves

Fig.1 Load current vs. Ambient temperature characteristics

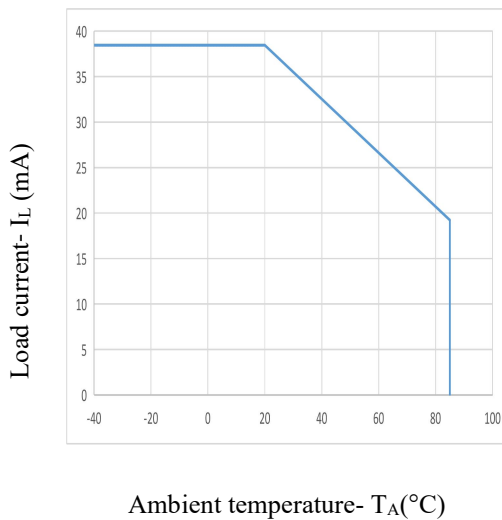


Fig.2 On resistance vs. Ambient temperature characteristics

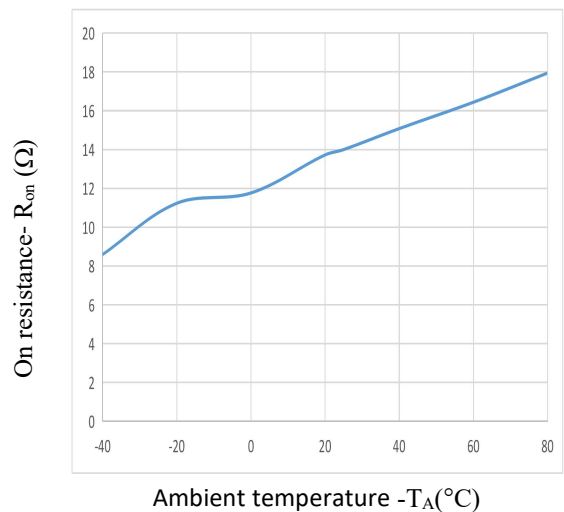


Fig.3 Turn on time vs. Ambient temperature characteristics

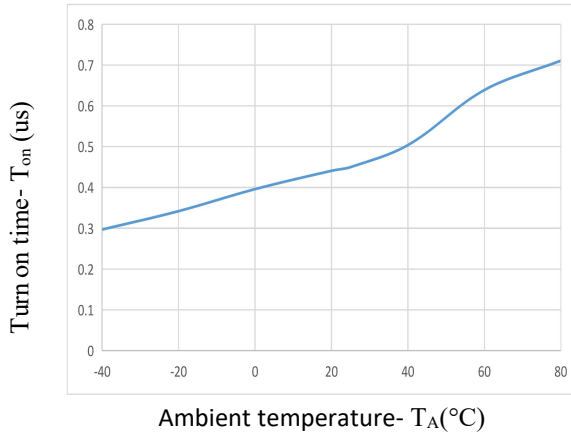


Fig.4 Turn off time vs. Ambient temperature characteristics

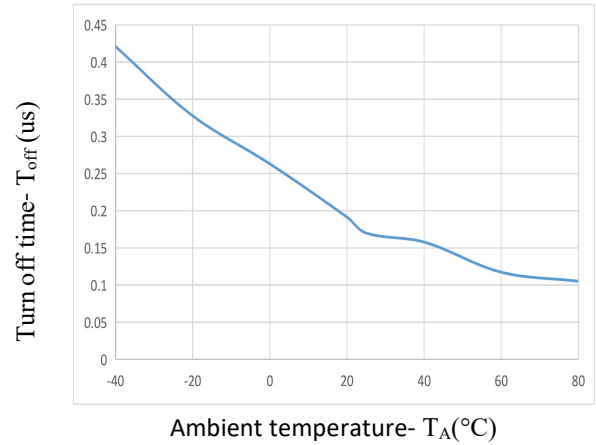


Fig.5 LED operate current vs. Ambient temperature characteristics

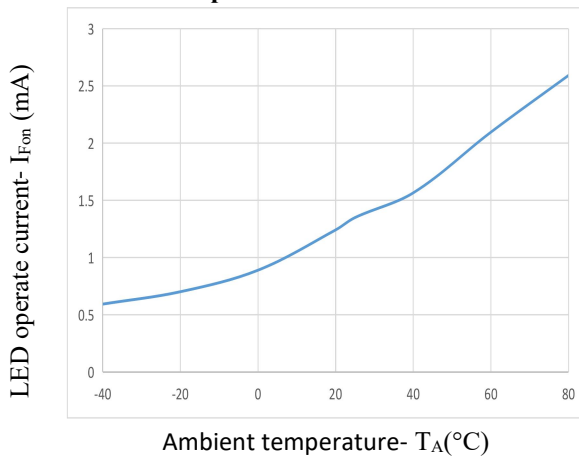


Fig.6 LED turn off current vs. Ambient temperature characteristics

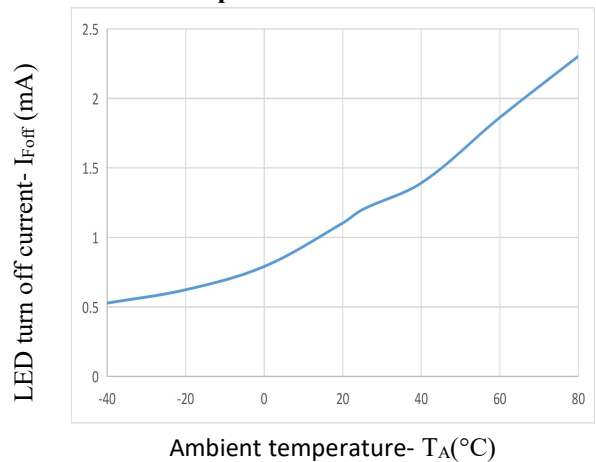


Fig.7 LED dropout voltage vs. Ambient temperature characteristics

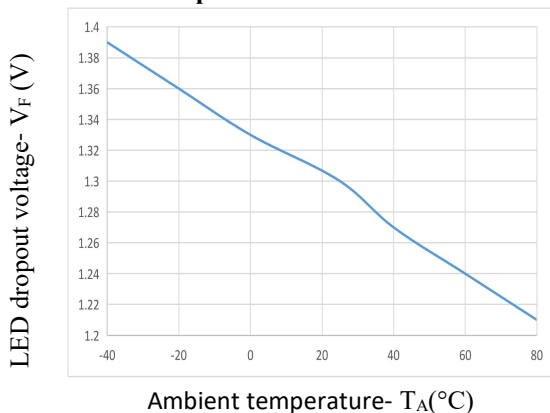


Fig.8 Output current vs Output voltage

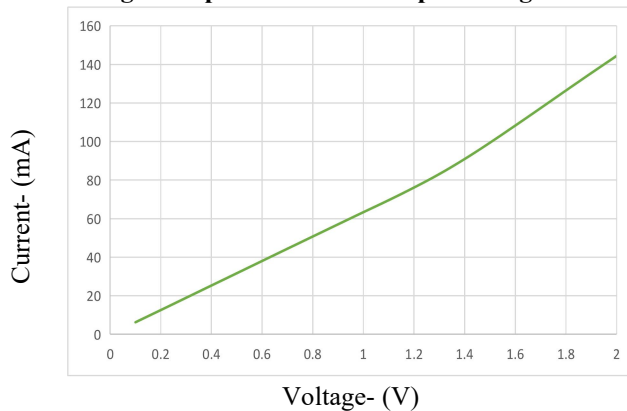


Fig.9 Off state leakage current vs Load voltage characteristics

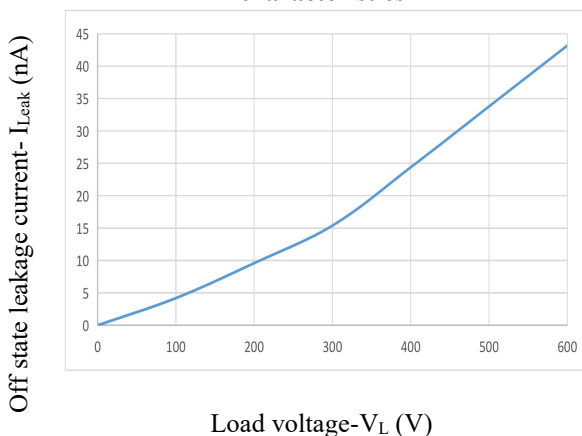


Fig.10 Turn on time vs Forward current characteristics

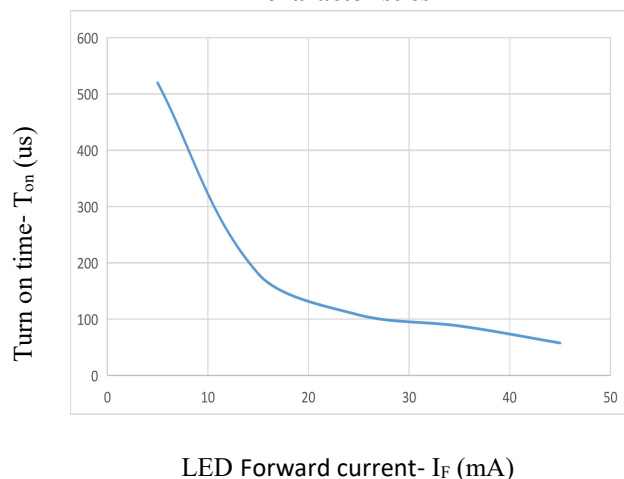
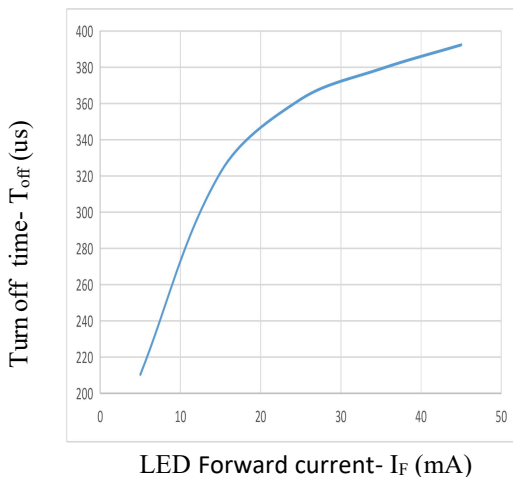
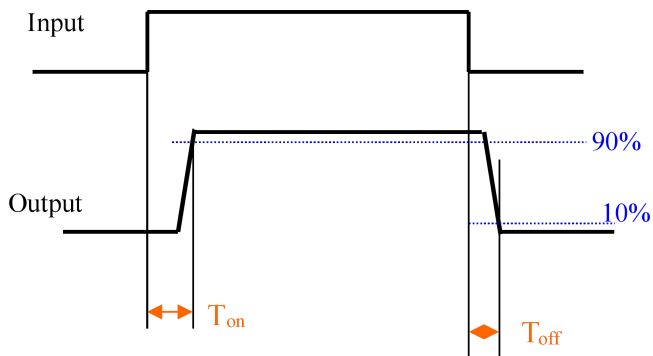


Fig.11 Turn off time vs Forward current characteristics

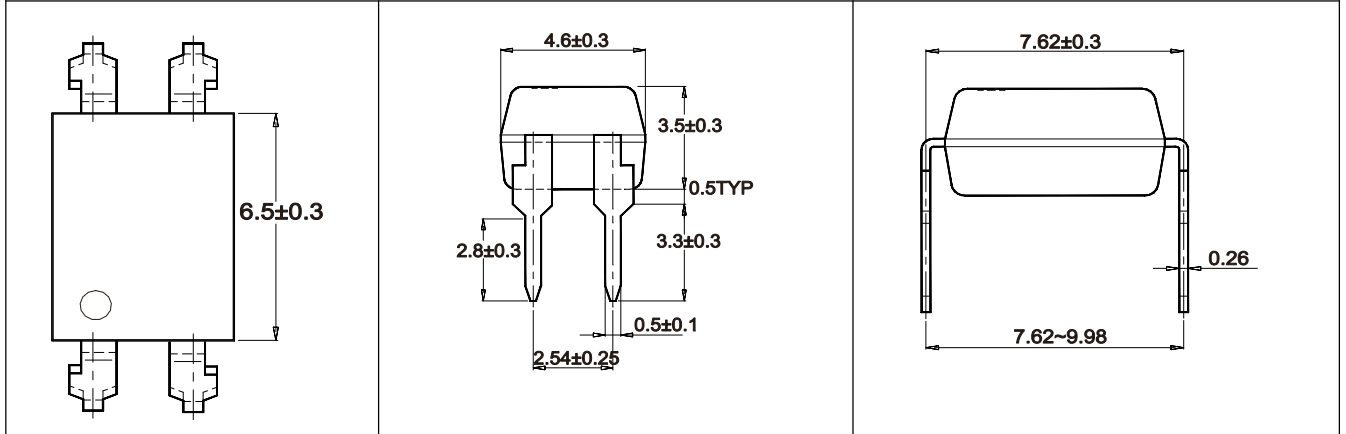


★ Turn on/off time

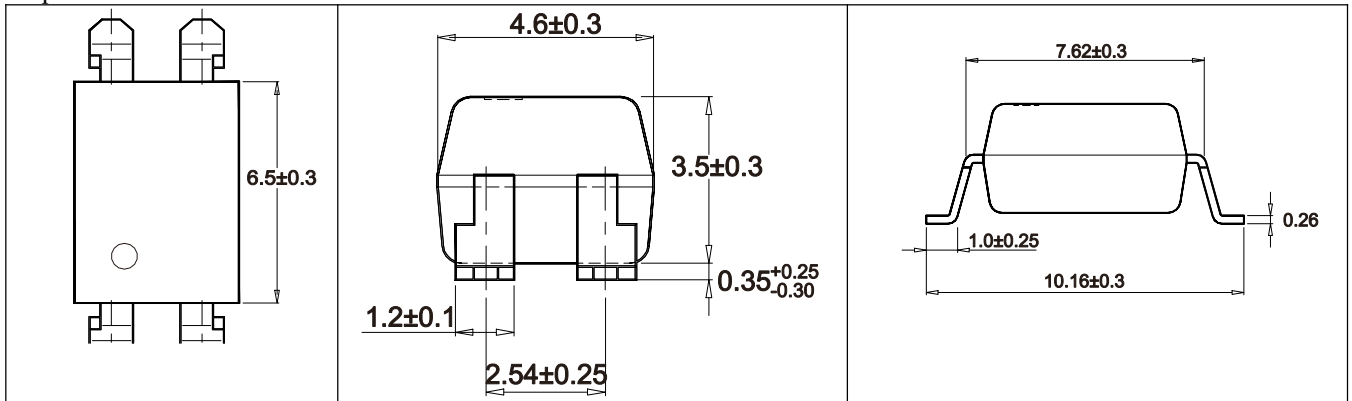


Outline Dimensions

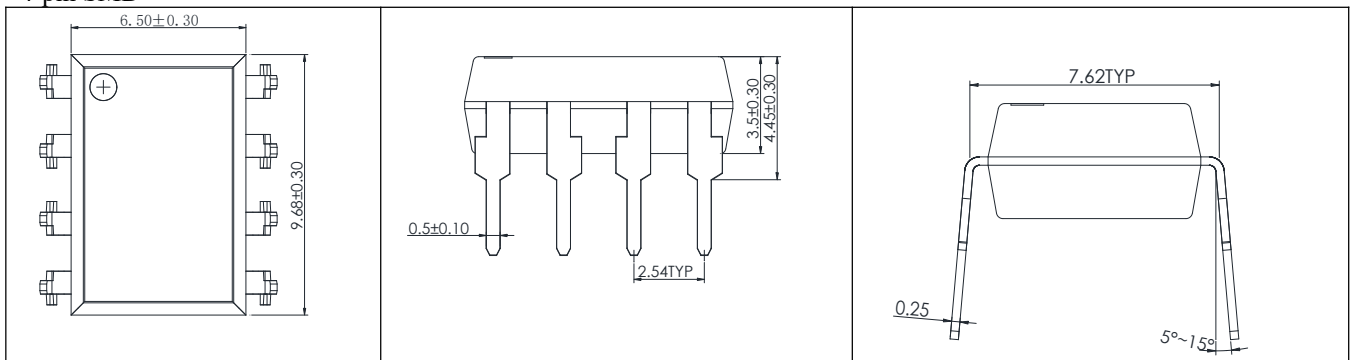
Unit: mm



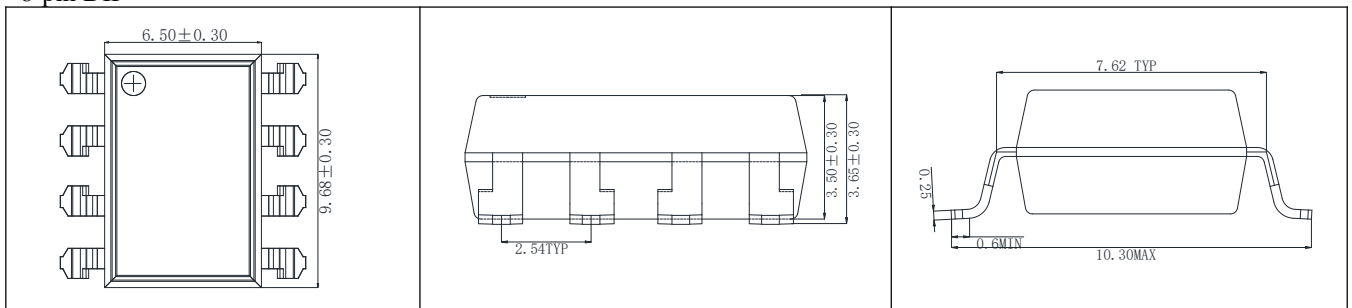
4-pin DIP



4-pin SMD



8-pin DIP



8pin SMD

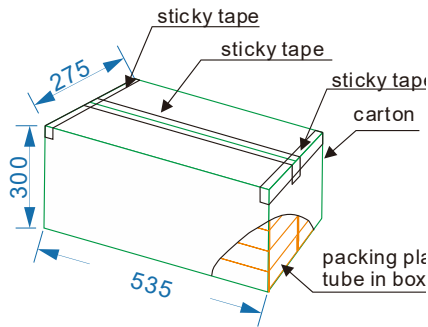
Packing

■ Summary table

Package Type	Packing Form	Quantity per Reel	Quantity per Box	Quantity per Carton	Antistatic Bag Specification	Box Specification	Carton Specification	Note
SMD-8	Reel (φ330mm Blue)	1K pcs/reel	2 reels/box	10 boxes/ctn	380*380mm	340*60*340 mm	620*360*365 mm	Guard band 200mm min.
SMD-4	Reel(φ330mm Blue)	2K pcs/reel	2 reels/box	10 boxes/ctn	380*380mm	340*60*340 mm	620*360*365 mm	
DIP-8	Tube (500*12*11mm)	45 pcs/tube	50 tubes/box	10 boxes /ctn	NA	525*128*56 mm	535*275*300 mm	Endplug (blue) and Endplug (white) keep the direction
DIP-4	Tube (500*12*11mm)	100pcs /tube	50 tubes/box	10 boxes /ctn	NA	525*128*56 mm	535*275*300 mm	

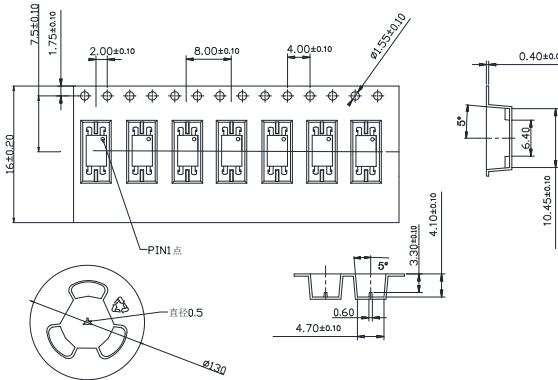
■ DIP-4(tube)

- 1) Qty/ctn: 50000pcs
- 2) Qty/tube: 100pcs
- 3) Qty/box: 50tubes
- 4) Schematic:



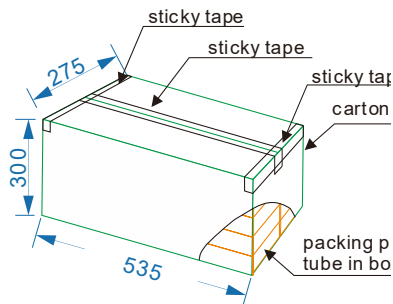
■ SMD-4(Reel)

- 1) Qty/ctn: 40000pcs
- 2) Qty/Reel: 2000pcs
- 3) Inner packing: 2reels/box
- 4) Schematic:



■ DIP-8(tube)

- 1) Qty/ctn: 22500pcs
- 2) Inner packing:
 - i. 45pcs/tube
 - ii. 50 tubes/box.
- 3) Schematic:



■ SMD-8(Reel)

- 1) Qty/ctn: 20000pcs
- 2) Qty/Reel: 1000pcs
- 3) Inner packing: 2reels/box
- 4) Schematic:

