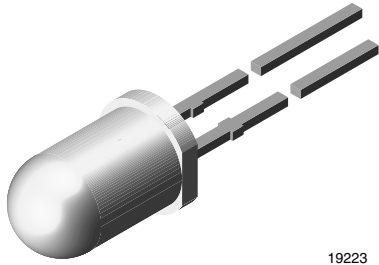




Low Current LED in Ø 5 mm Tinted Diffused Package



19223

PRODUCT GROUP AND PACKAGE DATA

- Product group: LED
- Package: 5 mm
- Product series: low current
- Angle of half intensity: $\pm 25^\circ$

FEATURES

- Low power consumption
- High brightness
- CMOS/MOS compatible
- Specified at $I_F = 2 \text{ mA}$
- Luminous intensity categorized
- Yellow and green color categorized
- Material categorization:
for definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT
HALOGEN
FREE
GREEN
(5-2008)

APPLICATIONS

- Low power DC circuits

PARTS TABLE														
PART	COLOR	LUMINOUS INTENSITY (mcd)			at I_F (mA)	WAVELENGTH (nm)			at I_F (mA)	FORWARD VOLTAGE (V)			at I_F (mA)	TECHNOLOGY
		MIN.	TYP.	MAX.		MIN.	TYP.	MAX.		MIN.	TYP.	MAX.		
TLLR5400	Red	0.63	1.2	-	2	612	-	625	2	-	1.9	2.4	2	GaAsP on GaP
TLLR5401	Red	1	2	-	2	612	-	625	2	-	1.9	2.4	2	GaAsP on GaP
TLLY5400	Yellow	0.63	1.2	-	2	581	-	594	2	-	2.4	2.9	2	GaAsP on GaP
TLLY5401	Yellow	1	2	-	2	581	-	594	2	-	2.4	2.9	2	GaAsP on GaP
TLLG5400	Green	0.63	1.2	-	2	562	-	575	2	-	1.9	2.4	2	GaP on GaP
TLLG5400-AS12	Green	0.63	1.2	-	2	562	-	575	2	-	1.9	2.4	2	GaP on GaP
TLLG5401	Green	1	2	-	2	562	-	575	2	-	1.9	2.4	2	GaP on GaP

ABSOLUTE MAXIMUM RATINGS ($T_{amb} = 25^\circ\text{C}$, unless otherwise specified)				
TLLR540., TLLY540., TLLG540.				
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Reverse voltage		V_R	6	V
DC forward current	$T_{amb} \leq 90^\circ\text{C}$	I_F	7	mA
Surge forward current	$t_p \leq 10 \mu\text{s}$	I_{FSM}	0.15	A
Power dissipation	$T_{amb} \leq 90^\circ\text{C}$	P_V	20	mW
Junction temperature		T_j	100	$^\circ\text{C}$
Operating temperature range		T_{amb}	-40 to +100	$^\circ\text{C}$
Storage temperature range		T_{stg}	-55 to +100	$^\circ\text{C}$
Soldering temperature	$t \leq 5 \text{ s}$, 2 mm from body	T_{sd}	260	$^\circ\text{C}$
Thermal resistance junction/ambient		R_{thJA}	500	K/W



OPTICAL AND ELECTRICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)							
TLLR540., RED							
PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Luminous intensity ⁽¹⁾	$I_F = 2\text{ mA}$	TLLR5400	I_V	0.63	1.2	-	mcd
		TLLR5401	I_V	1	2	-	mcd
Dominant wavelength	$I_F = 2\text{ mA}$		λ_d	612	-	625	nm
Peak wavelength	$I_F = 2\text{ mA}$		λ_p	-	635	-	nm
Angle of half intensity	$I_F = 2\text{ mA}$		ϕ	-	± 25	-	deg
Forward voltage	$I_F = 2\text{ mA}$		V_F	-	1.9	2.4	V
Reverse voltage	$I_R = 10\text{ }\mu\text{A}$		V_R	6	20	-	V
Junction capacitance	$V_R = 0\text{ V}$, $f = 1\text{ MHz}$		C_j	-	50	-	pF

Note⁽¹⁾ In one packing unit $I_{Vmin}/I_{Vmax} \leq 0.5$

OPTICAL AND ELECTRICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)							
TLLY540., YELLOW							
PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Luminous intensity ⁽¹⁾	$I_F = 2\text{ mA}$	TLLY5400	I_V	0.63	1.2	-	mcd
		TLLY5401	I_V	1	2	-	mcd
Dominant wavelength	$I_F = 2\text{ mA}$		λ_d	581	-	594	nm
Peak wavelength	$I_F = 2\text{ mA}$		λ_p	-	585	-	nm
Angle of half intensity	$I_F = 2\text{ mA}$		ϕ	-	± 25	-	deg
Forward voltage	$I_F = 2\text{ mA}$		V_F	-	2.4	2.9	V
Reverse voltage	$I_R = 10\text{ }\mu\text{A}$		V_R	6	20	-	V
Junction capacitance	$V_R = 0\text{ V}$, $f = 1\text{ MHz}$		C_j	-	50	-	pF

Note⁽¹⁾ In one packing unit $I_{Vmin}/I_{Vmax} \leq 0.5$

OPTICAL AND ELECTRICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)							
TLLG540., GREEN							
PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Luminous intensity ⁽¹⁾	$I_F = 2\text{ mA}$	TLLG5400	I_V	0.63	1.2	-	mcd
		TLLG5401	I_V	1	2	-	mcd
Dominant wavelength	$I_F = 2\text{ mA}$		λ_d	562	-	575	nm
Peak wavelength	$I_F = 2\text{ mA}$		λ_p	-	565	-	nm
Angle of half intensity	$I_F = 2\text{ mA}$		ϕ	-	± 25	-	deg
Forward voltage	$I_F = 2\text{ mA}$		V_F	-	1.9	2.4	V
Reverse voltage	$I_R = 10\text{ }\mu\text{A}$		V_R	6	20	-	V
Junction capacitance	$V_R = 0\text{ V}$, $f = 1\text{ MHz}$		C_j	-	50	-	pF

Note⁽¹⁾ In one packing unit $I_{Vmin}/I_{Vmax} \leq 0.5$



TYPICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)

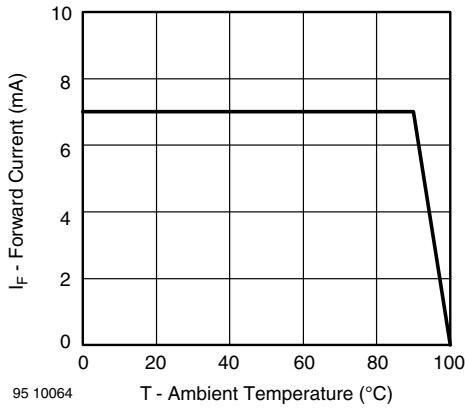


Fig. 1 - Forward Current vs. Ambient Temperature

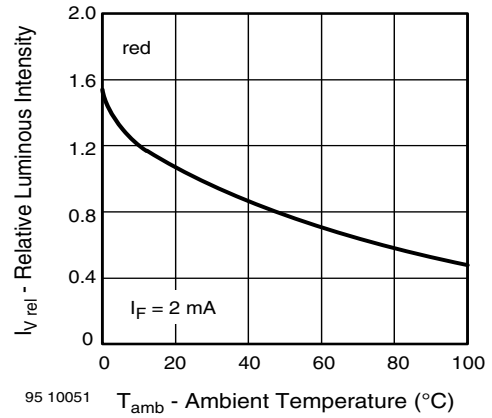


Fig. 4 - Relative Luminous Intensity vs. Ambient Temperature

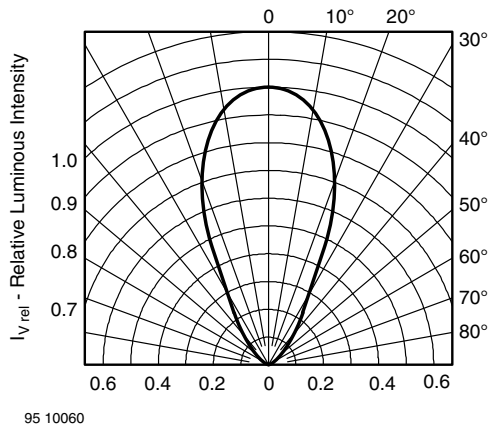


Fig. 2 - Relative Luminous Intensity vs. Angular Displacement

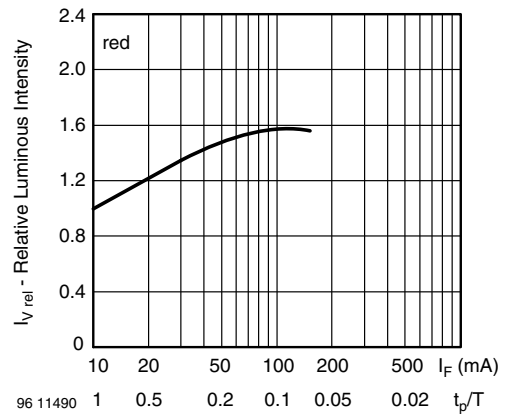


Fig. 5 - Relative Luminous Intensity vs. Forward Current/Duty Cycle

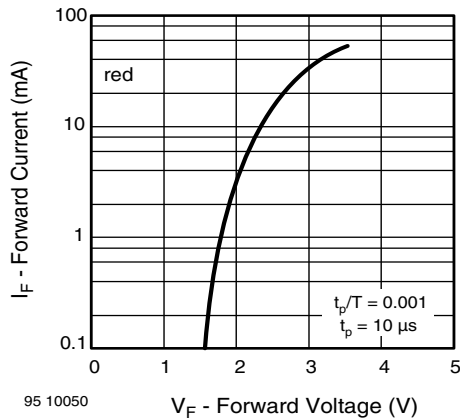


Fig. 3 - Forward Current vs. Forward Voltage

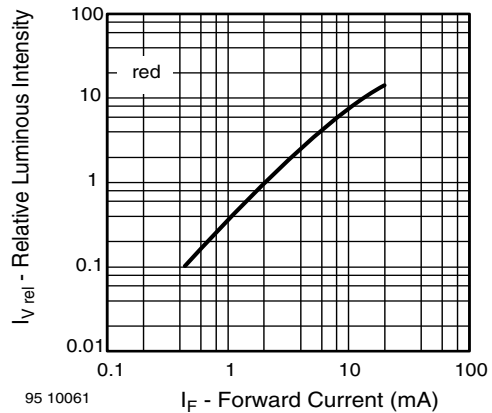


Fig. 6 - Relative Luminous Intensity vs. Forward Current

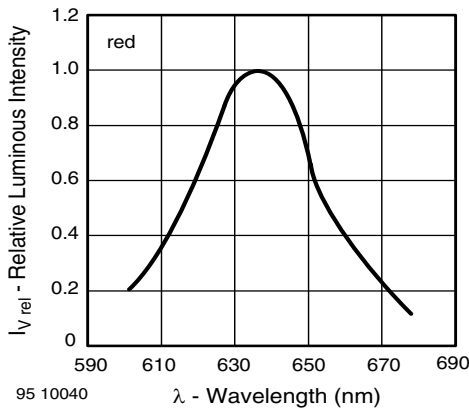


Fig. 7 - Relative Intensity vs. Wavelength

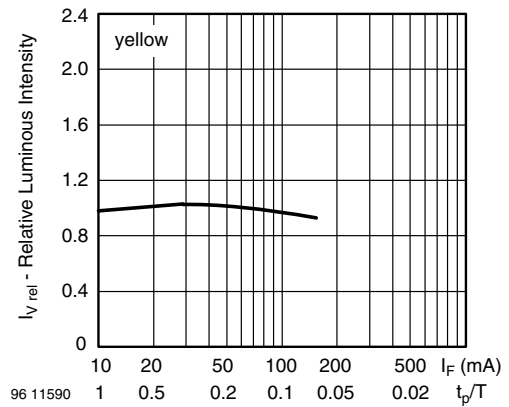


Fig. 10 - Relative Luminous Intensity vs. Forward Current/Duty Cycle

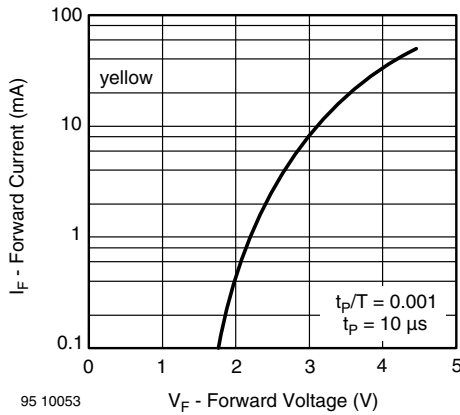


Fig. 8 - Forward Current vs. Forward Voltage

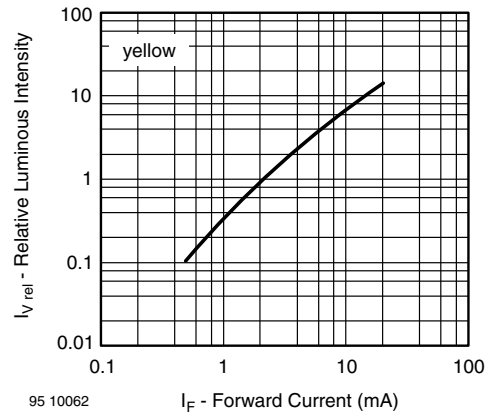


Fig. 11 - Relative Luminous Intensity vs. Forward Current

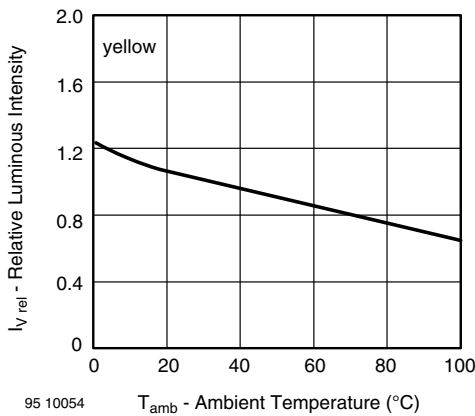


Fig. 9 - Relative Luminous Intensity vs. Ambient Temperature

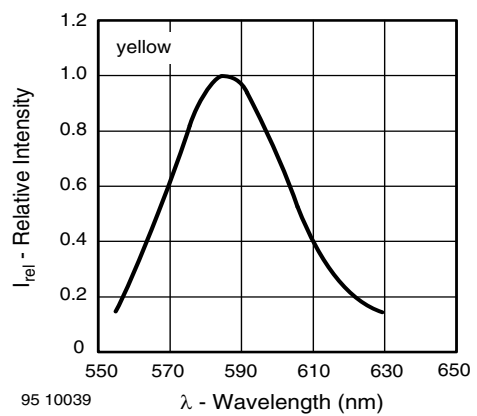


Fig. 12 - Relative Intensity vs. Wavelength

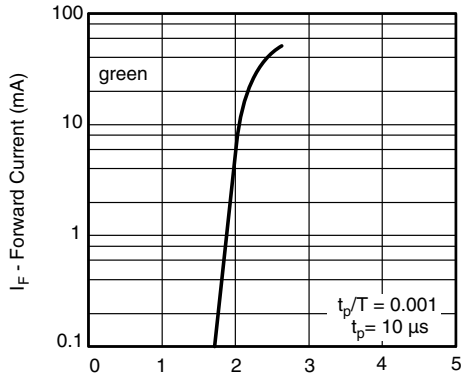


Fig. 13 - Forward Current vs. Forward Voltage

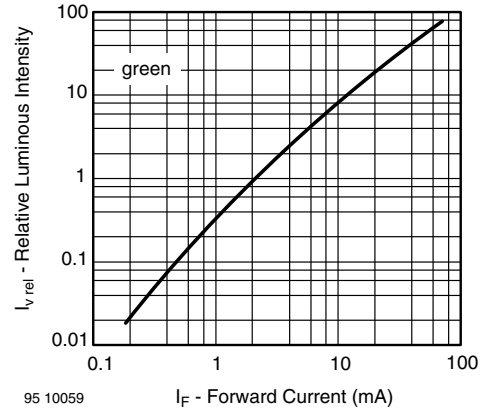


Fig. 16 - Relative Luminous Intensity vs. Forward Current

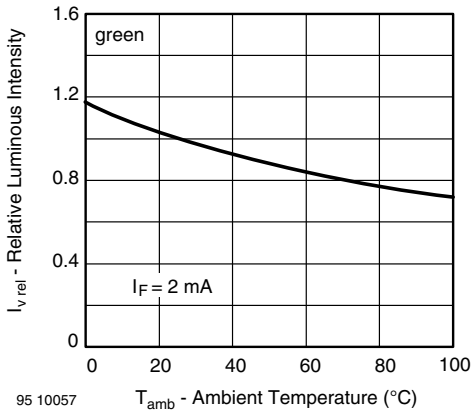


Fig. 14 - Relative Luminous Intensity vs. Ambient Temperature

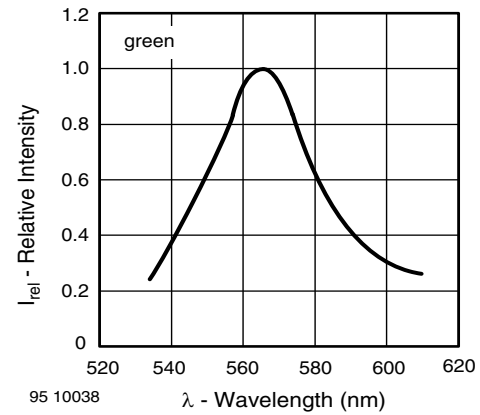


Fig. 17 - Relative Intensity vs. Wavelength

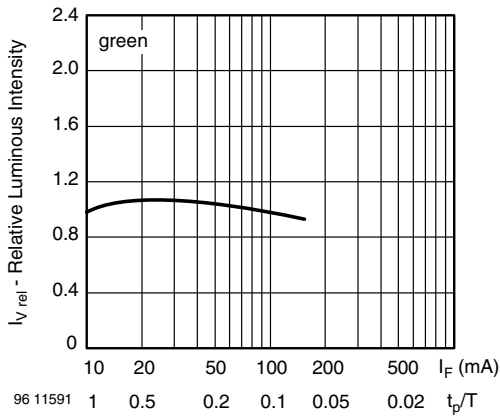
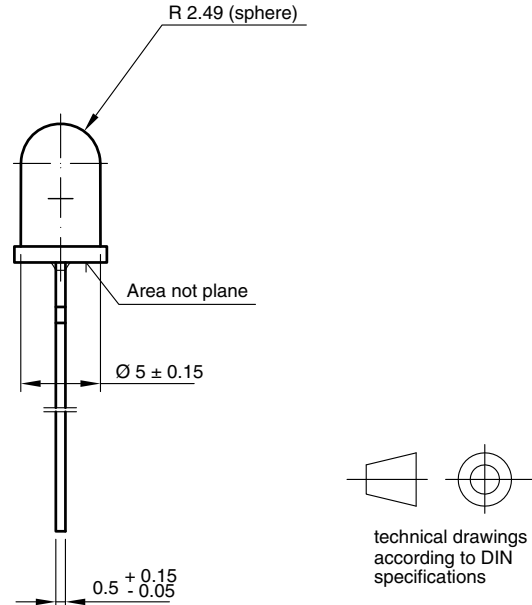
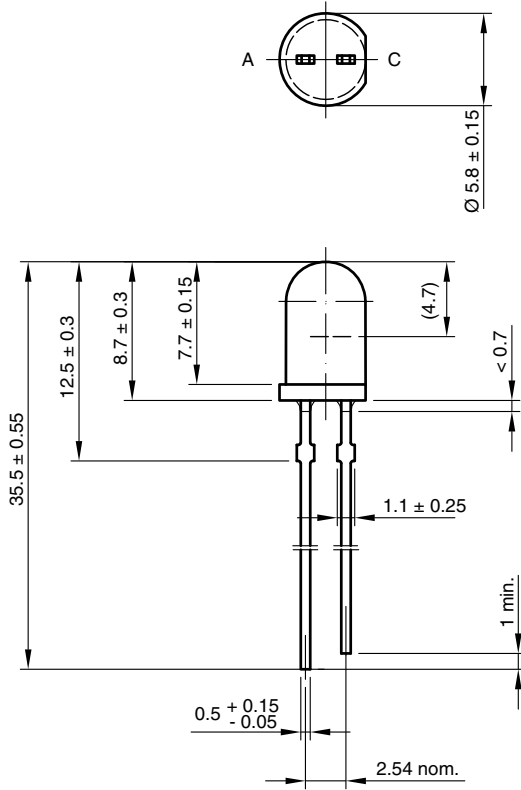


Fig. 15 - Relative Luminous Intensity vs. Forward Current/Duty Cycle

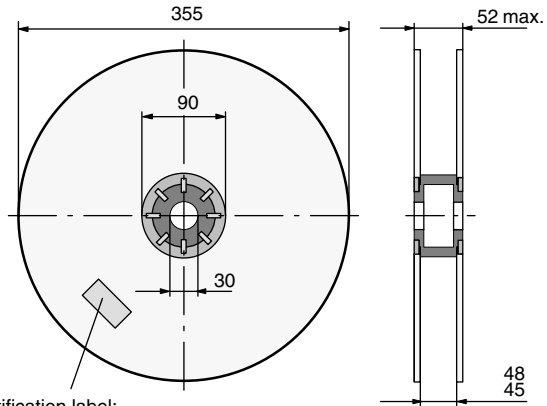


PACKAGE DIMENSIONS in millimeters



6.544-5258.02-4
Issue: 7; 23.07.10
95 10916

REEL

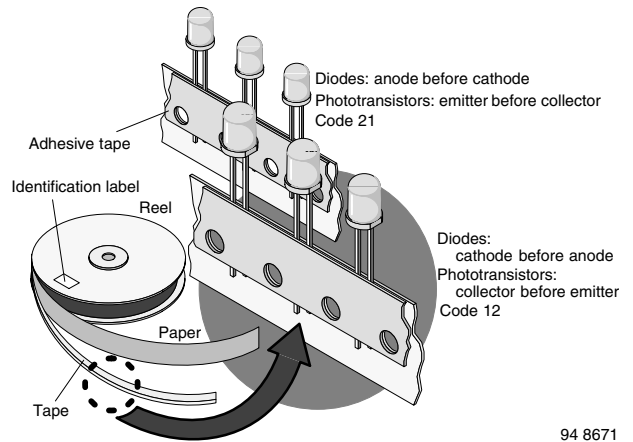


Identification label:
Vishay/type/group/tape code/production code/quantity

948641

Fig. 18 - Reel Dimensions

TAPE



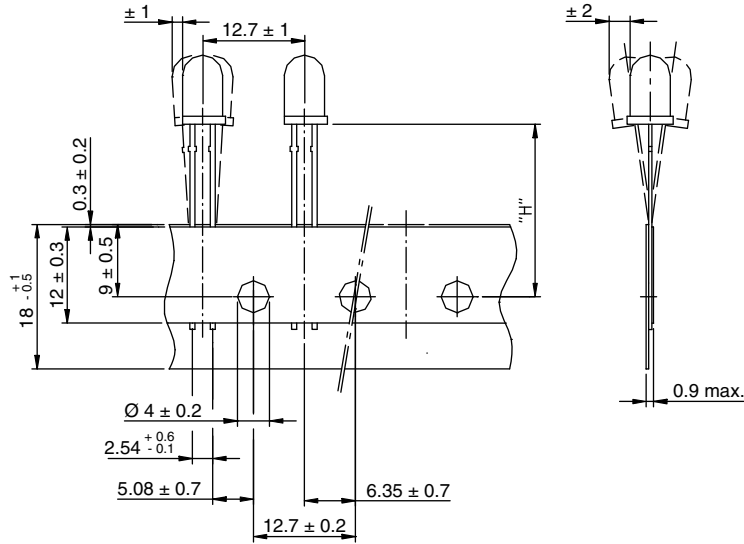
94 8671

Fig. 19 - LED in Tape

AS12 = cathode leaves tape first



TAPE DIMENSIONS in millimeters



Measure limit over 20 index-holes: ± 1

Quantity per:	Reel (Mat.-no. 1764)
	1000

94 8172

Option	Dim. "H" ± 0.5 mm
AS	17.3



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- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

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JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели, кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



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