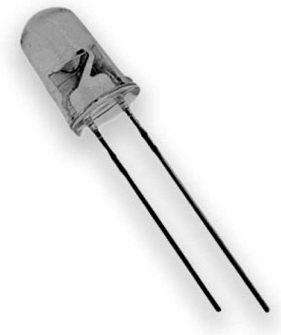
WINGER® LED 5 mm white blinking, typ. 8,000 K, up to 14,000 mcd

Item number	503500100
Brand	WINGER®
Package	5 mm, water clear, blinking
Emitted colour	white blinking, typ. 8,000 K
Luminous intensity	up to 14,000 mcd
Viewing angle	20°



This WINGER® through-hole LED (item no. 503500100) is a white blinking LED in the widely used 5 mm standard package with a water-clear lens. No type code is assigned in the available sources. It emits white light at a typical colour temperature of 8,000 K, with a luminous intensity of up to 14,000 mcd and a viewing angle of 20°. Typical flash frequency is 1.5 Hz according to the shop. Whether an external series resistor is required, and whether an internal IC is fitted, is not stated in the available sources.

Typical uses are signalling, warning lights and eye-catching displays, depending on the number and arrangement of the LEDs.

1 Optical and Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Forward voltage	V_F		3,2		V	
Viewing angle (50 % power angle)	2θ½		20		°	
Luminous intensity	I_V			14,000	mcd	
Colour temperature	T_C		8,000		K	
Flash frequency	f		1,5		Hz	
Forward current (operating)	I_F		20		mA	

Unless otherwise stated, values at typ. I_F = 20 mA, T_A = 25 °C. Built from shop data only; no previous datasheet version and no type code are available for this article.
Whether an external series resistor is required and whether an internal IC is fitted is not stated in the available sources.

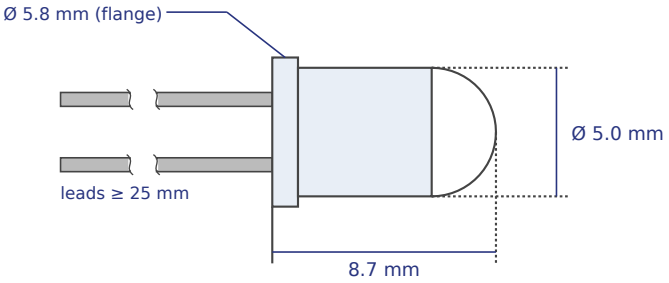
2 Absolute Maximum Ratings

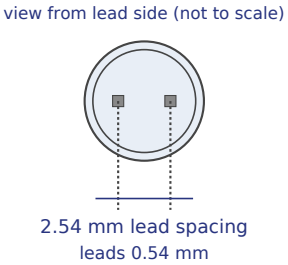
Parameter	Symbol	Rating
Forward current	I_F	on request
Peak forward current	I_{FP}	on request
Reverse voltage	V_R	on request
Max. power dissipation	P_D	on request
Operating temperature range	T_{OPR}	on request
Storage temperature range	T_{STG}	on request
Lead soldering temperature	T_{SOL}	on request

Absolute maximum ratings at T_A = 25 °C. The shop does not state absolute maximum values; they are given as “on request”.

3 Mechanical Data

Parameter	Value
Package	5 mm round, through-hole, water-clear lens
Body diameter	Ø 5.0 mm
Flange diameter	Ø 5.8 mm
Body height (flange to lens tip)	8.7 mm
Height from flange front face to lens tip	7.7 mm
Lead spacing / lead cross-section	2.54 mm / 0.54 mm
Lead length	≥ 25 mm (anode; cathode shorter)
Polarity	long lead = anode (+); short lead and flat on flange = cathode (−)





Side view (schematic, not to scale). Long lead = anode, flat on flange = cathode side.

Dimensions in mm, taken from the product-page drawing (shop). Lead thickness is the single dimension shown on that drawing (not stated as a square cross-section). The 1.5 mm dimension on the shop drawing marks the stepped lead end, not a shortening of the cathode; the cathode is drawn shorter but is not dimensioned. No general tolerance is given on the shop drawing.

4 Ordering Information and Packaging

Parameter	Value
Item number	503500100
Packaging	loose in bag
Packaging unit	500 pcs per bag

5 Handling and Application Notes

- Operate this blinking LED only within the ratings given in this datasheet. The available sources do not state whether an external series resistor is required or whether the LED may be connected directly to a voltage source; do not exceed the stated current, voltage and power ratings (where given).
- When connecting several of these LEDs, observe the ratings of each device.
- Do not exceed the absolute maximum ratings, not even briefly; avoid reverse voltage.
- Bend the leads only before soldering and at room temperature, never directly at the body (typ. at least 3 mm [4] from the body). Hold the lead firmly between body and bending point; never use the body as a fulcrum.
- Do not apply mechanical stress to the leads or the lens while the LED is hot (during and directly after soldering). Let it cool down to room temperature first.
- Clean with isopropyl alcohol only if necessary; do not use aggressive solvents. Ultrasonic cleaning only after prior qualification.
- Do not look directly into the LED at short distance for a longer period (glare).

[4] Typical value for this LED type; not individually measured / subject to confirmation.

6 ESD Protection

Parameter	Value
ESD withstand voltage (HBM)	1,000 V [4] (HBM, ANSI/ESDA/JEDEC JS-001)

- LEDs are electrostatic-sensitive devices (ESD). Electrostatic discharge or voltage surges can damage the LED immediately or reduce its service life without visible signs.
- Handle and process only in an ESD protected area (EPA) in accordance with IEC 61340-5-1: grounded work surfaces, equipment and soldering irons, wrist straps or ESD gloves, ESD-safe packaging and transport containers.
- Keep the LEDs in their ESD-safe packaging until processing.

[4] Typical value for this LED type; not individually measured / subject to confirmation.

7 Soldering Instructions

Parameter	Value
Wave soldering	max. 260 °C, max. 5 s, at least 3 mm from the body [4]
Preheating (wave soldering)	max. 100 °C, max. 60 s [4]
Hand soldering	max. 350 °C, max. 3 s, at least 3 mm from the body, once only [4]

- Recommended methods: wave soldering or hand soldering. Through-hole LEDs are not intended for reflow soldering unless explicitly stated.
- Solder only once if possible and keep the specified minimum distance between soldering point and body. Never dip the body into the solder.
- Hand soldering: use a temperature-controlled, grounded soldering iron; do not touch the body with the tip.
- Shorten the leads preferably after soldering and without transferring stress to the body.

[4] Typical value for this LED type; not individually measured / subject to confirmation.

8 Storage

Parameter	Value
Storage temperature	on request
Recommended storage conditions	≤ 30 °C, ≤ 60 % RH, in original packaging [4]
Shelf life	12 months from delivery in unopened original packaging [4]

- Store in the original packaging in a dry, clean environment free of corrosive gases. Avoid condensation and rapid temperature changes.
- High humidity or sulphur-containing atmospheres can discolour the lead surface and impair solderability; process the LEDs promptly.

[4] Typical value for this LED type; not individually measured / subject to confirmation.

9 Environmental Compliance

Parameter	Value
RoHS (EU) 2011/65/EU incl. (EU) 2015/863	compliant [4]
REACH (EC) 1907/2006	no SVHC of the candidate list above 0.1 % (w/w) known [4]

Declarations of conformity are available on request.
Dispose of as electronic waste in accordance with local regulations.

[4] Typical value for this LED type; not individually measured / subject to confirmation.

10 Warranty and Application Limits

- Perform an acceptance inspection on arrival of the goods; return defective items stating the defect and quantity.
- Integration of the LEDs into the application and verification of service life and other qualities in practical use shall be carried out by the user.
- Do not use the LEDs in applications requiring higher reliability and safety where failure or malfunction could endanger life or health. The seller assumes no liability for claims or damages resulting from use contrary to the intended purpose or without written consent.
- The seller assumes no responsibility for damage or defects caused by operation at currents exceeding the absolute maximum ratings; these are not covered by warranty.

Values marked [4] are typical values for this LED type and have not been individually measured for this item; they are subject to confirmation. Please contact us for binding values: info@led1.de · +49 340 8508260.

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