

ZX-TC1 desk luminaire



ZX-TC1 is a compact LED desk luminaire for reading and writing tasks, with two operating modes selected from the control panel: Reading at 4,000 K and Comfort at 2,700 K. The head carries a 570 × 82 mm light panel on a two-section folding arm — a 420 mm upper arm and a 260 mm lower arm on a 220 × 186 mm base — so that the light can be positioned over the working plane. Brightness is adjusted in five steps, a seat sensor switches the luminaire on when the user sits down and off after they leave, and the last setting used is remembered. The light panel is side-emitting and the luminaire is classified RG0 for photobiological safety. In the measured reading and writing condition the illuminance reaches 1,580 lx at the centre of the work plane with a centre-area uniformity of 1.96, and both settings are within the rectangular-grid requirements of GB/T 9473-2022. The body is made of aluminium alloy with ABS and PC parts.

Features

Light output (integrating sphere)	563 lm (4,000 K) · 514 lm (2,700 K)
Rated power / current / supply	18 W / 0.15 A (measured 16.8 W at 4,000 K · 17.6 W at 2,700 K); external 12 V / 1.5 A adapter, AC 220 – 240 V 50 Hz
Modes / dimming	2 modes — Reading (4,000 K), Comfort (2,700 K); 5 brightness steps from the control panel; last setting remembered; seat sensor switches the luminaire on when seated and off when the user leaves
Colour temperature	4,000 K (measured 3,797 K) · 2,700 K (measured 2,675 K)
Colour rendering	Ra 97 · Rf 95 · Rg 103 · CQS 98 · R9 92 · R12 91
Colour consistency	SDCM < 5 (measured 2.2 at 2,700 K · 5.3 at 4,000 K)
Glare / flicker	UGR < 11 · no visible flicker
Illuminance on the desk	Centre ≥ 1,500 lx · 500 × 300 mm average ≥ 900 lx · 700 × 500 mm average ≥ 500 lx · uniformity ≤ 1.96
Reading and writing performance	Meets GB/T 9473-2022 rectangular-grid requirements — test result PASS
Light source / optical	4,000 K module 60 × 0.5 W · 2,700 K module 60 × 0.5 W; side-emitting panel; RG0 (exempt group)
Head / base / arm / housing	Head 570 × 82 × 33 mm · base 220 × 186 × 5 mm · upper arm 420 × 32 mm · lower arm 260 × 38 mm; aluminium alloy with ABS and PC parts
Net / gross weight	1.95 kg / 2.94 kg
Warranty	5 years

Application areas

Home study areas, home offices, reading and writing tasks, dormitories.

Technical data

Input voltage	AC 220 – 240 V, 50 Hz via an external 12 V / 1.5 A adapter
Rated power	18 W
Rated current	0.15 A
Dimming and control	5 brightness steps and mode selection from the control panel on the head; seat sensor switches the luminaire on when the user sits down and off after the user leaves; last setting remembered
Luminous flux (integrating sphere)	563 lm (4000 K) · 514 lm (2700 K)
Luminous efficacy (measured)	33.6 lm/W (4000 K) · 29.2 lm/W (2700 K)
Colour temperature	4000 K (measured 3,797 K) · 2700 K (measured 2,675 K)
Colour rendering index	Ra 96.2, R9 92 (4000 K) · Ra 97.6, R9 89 (2700 K)
Colour consistency	SDCM 5.3 (4000 K) · SDCM 2.2 (2700 K)
Colour metrics	TM-30 Rf 95 · Rg 103 (2700 K, measured); Rf 95 · Rg 103 · CQS 98 · R9 92 · R12 91 (specification)
Glare	UGR < 11
Flicker	No visible flicker
Illuminance (specification)	Centre ≥ 1,500 lx · 500 × 300 mm average ≥ 900 lx · 700 × 500 mm average ≥ 500 lx · uniformity ≤ 1.96
Photobiological safety	RG0 (exempt group)
Optical design	Side-emitting light panel; no direct view of the LEDs
Illuminance (measured)	4,000 K at 400 mm light-surface height: centre maximum 1,580 lx · centre-area minimum 805 lx · total-area minimum 506 lx; 2,700 K at 500 mm: centre maximum 1,337 lx · centre-area minimum 652 lx · total-area minimum 418 lx
Uniformity (measured)	400 mm: centre area 1.96 (limit ≤ 3) · total area 3.12 (limit ≤ 7); 500 mm: centre area 2.05 (limit ≤ 3) · total area 3.20 (limit ≤ 7)
Light source	4,000 K module 60 × 0.5 W LEDs · 2,700 K module 60 × 0.5 W LEDs
Head / base / arm dimensions	Head 570 × 82 × 33 mm · base 220 × 186 × 5 mm · upper arm 420 × 32 mm · lower arm 260 × 38 mm
Material	Aluminium alloy with ABS and PC parts
Net weight / gross weight / packing	1.95 kg / 2.94 kg · 207 × 106 × 750 mm, 1 pc per carton; carton gross weight 2.94 kg
Certification / warranty	CE · RoHS · UL · 5 years

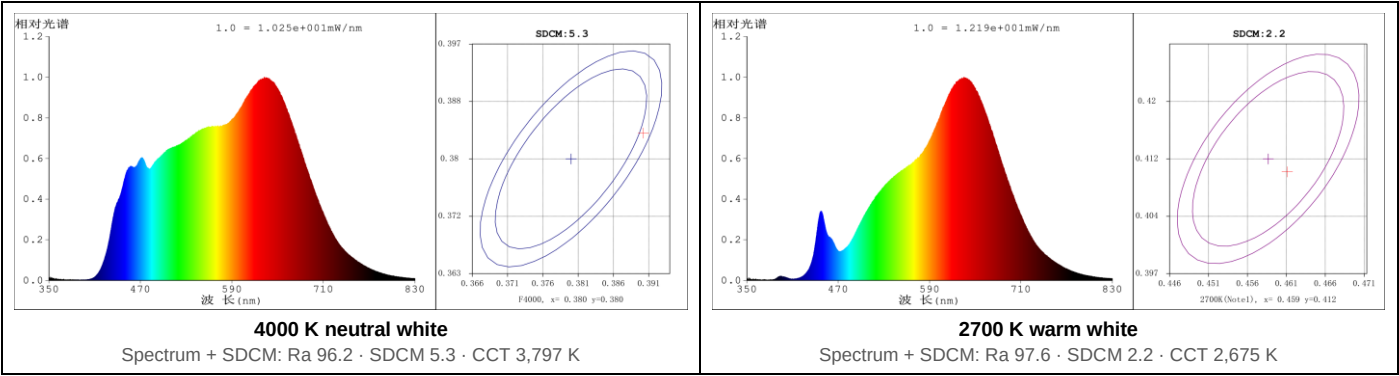
Light output modes

Mode	Light source	Colour temperature	Luminous flux	Dimming
Reading	Main light	4,000 K	563 lm	5 brightness steps
Comfort	Main light	2,700 K	514 lm	5 brightness steps

The two modes are selected from the control panel on the head. Brightness is adjusted in five steps, and the last setting used is restored when the luminaire is switched on again.

Photometric data

Spectral power distribution and colour-ellipse (SDCM) plots, measured at rated output



Measured with an EVERFINE HaasSuite spectroradiometer system on a sample at 25.3 °C / 65 % RH (photometric test record, 13 Mar 2025). The right-hand panel of each figure is the SDCM colour-ellipse plot; CCT values are measured values at rated output.

Photometric measurements (integrating sphere)

Setting	Rated CCT	Measured CCT	Luminous flux	Efficacy	Ra	R9	SDCM
Neutral white	4000 K	3,797 K	563 lm	33.6 lm/W	96.2	92	5.3
Warm white	2700 K	2,675 K	514 lm	29.2 lm/W	97.6	89	2.2

Integrating-sphere measurement of the complete luminaire with the supplied adapter, sample at 25.3 °C / 65 % RH. TM-30 colour fidelity / gamut: Rf 95 / Rg 103 (2700 K). Full CRI values, 4000 K: R1–R15 = 96, 96, 99, 96, 96, 95, 96, 96, 92, 93, 96, 89, 95, 99, 96. Full CRI values, 2700 K: R1–R15 = 100, 99, 95, 97, 99, 98, 98, 96, 89, 96, 94, 91, 100, 96, 98.

Illuminance over the work plane (GB/T 9473-2022 rectangular grid)

Light-surface height	CCT	Centre maximum	Centre-area minimum	Total-area minimum	Centre-area uniformity	Total-area uniformity	Result
400 mm	4000 K	1,580 lx	805 lx (≥ 500)	506 lx (≥ 250)	1.96 (≤ 3)	3.12 (≤ 7)	Pass
500 mm	2700 K	1,337 lx	652 lx (≥ 500)	418 lx (≥ 250)	2.05 (≤ 3)	3.20 (≤ 7)	Pass

Illuminance test report of 11 Jun 2025, measured in the reading and writing mode with the 12 V / 1.5 A adapter, five minutes after switch-on, and judged against the rectangular grid of GB/T 9473-2022; equipment: EVERFINE CAS-200 lighting analyser and SFIM-400 lux meter. The 400 mm record was taken at 4000 K and the 500 mm record at 2700 K, as stated in the test records.

Electrical characteristics (measured at AC 220 V)

Setting	Voltage	Current	Power
Neutral white (4000 K), rated output	220.5 V	0.129 A	16.8 W
Warm white (2700 K), rated output	220.5 V	0.135 A	17.6 W

Measured at the AC input of the supplied adapter, 50 Hz; values taken from the photometric test record of 13 Mar 2025.

Illuminance distribution (measured grid, lux)

4000 K · light-surface height 400 mm

Row	A	B	C	D	E	F	G	H
5	—	768	982	1,079	1,104	1,001	780	—
4	741	—	1,422	1,527	1,580	1,560	753	—
3	724	1,028	—	—	—	1,037	743	—
2	641	953	—	—	—	969	645	—
1	626	—	805	858	875	867	—	638
0	—	506	527	538	537	547	529	—

Centre maximum 1,580 lx · centre-area minimum 805 lx · total-area minimum 506 lx · centre-area uniformity 1.96 · total-area uniformity 3.12

2700 K · light-surface height 500 mm

Row	A	B	C	D	E	F	G	H
5	—	754	854	986	987	982	772	—
4	635	—	1,105	1,327	1,337	1,198	642	—
3	589	879	—	—	—	898	597	—
2	515	821	—	—	—	843	524	—
1	489	—	652	758	775	767	—	492
0	—	418	448	449	452	438	442	—

Centre maximum 1,337 lx · centre-area minimum 652 lx · total-area minimum 418 lx · centre-area uniformity 2.05 · total-area uniformity 3.20

Values in lux (lx) on the rectangular measurement grid of GB/T 9473-2022; rows 5 to 0 run from the back to the front of the work plane and columns A to H from left to right, exactly as recorded in the test reports. “—” marks a point outside the test grid. Dimensioned component drawings are available on request.

Installation and safety notices

- For indoor use only. Do not use the luminaire in damp areas or near water.
- Use only the 12 V / 1.5 A adapter supplied with the luminaire. Disconnect the adapter from the mains before cleaning or moving the luminaire.
- Do not look directly at the light source. Clean the luminaire with a soft dry cloth only, with the luminaire switched off and cooled down.
- Do not cover the light panel or the head, and do not place the luminaire on an unstable or uneven surface. Keep the folding arm clear of obstacles when adjusting the head. Repair and replacement of the light source or the control gear must be carried out by a qualified person.

Shenzhen Zhexian Optoelectronics Technology Co., Ltd.

Room 909, Hongfa Xiyue Building, No. 111 Chuangye 2nd Road, Zone 27, Dalang Community, Xin'an Subdistrict, Bao'an District, Shenzhen, Guangdong, China

E-mail: leslie@zhexianlighting.com · www.szzxgd.en.alibaba.com · Tel: +86 183 4226 3250

Certification: CE · RoHS · UL

All values in this specification are typical values from laboratory measurement; for concrete data and shipping inspection reports please contact us. Information is subject to change without notice. Please verify all details before ordering.

© Shenzhen Zhexian Optoelectronics Technology Co., Ltd. All rights reserved.