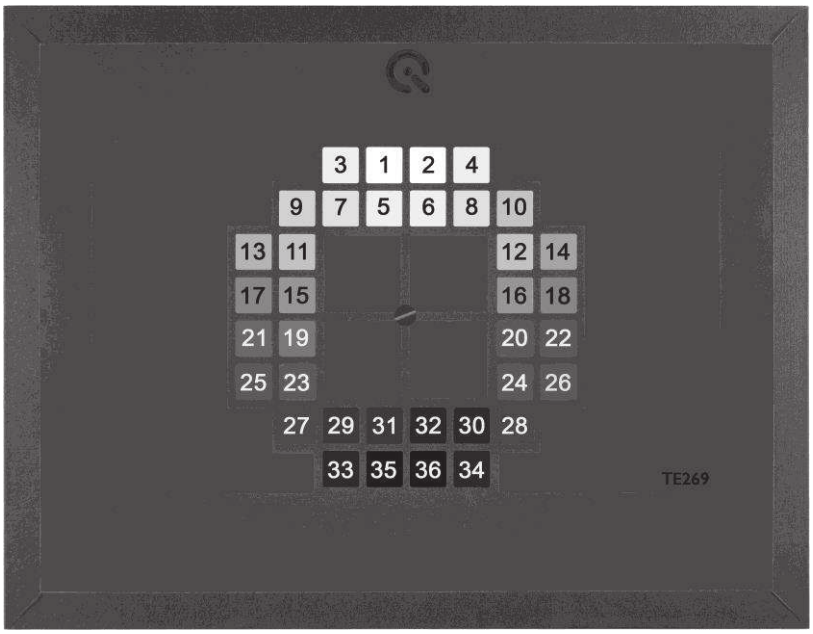
TE269 V3 D data sheet



Overview

Product name	☐ TE269A V3 ☐ TE269B V3 ☐ TE269C V3 ☐ other: _____
Principle	Transparent gray scale test chart to determine the OECF, noise, SNR and dynamic range especially of digital high dynamic range cameras.

Features

OECF

Type/s of pattern	gray scale, circular arranged (most optical systems are rotationally symmetric so all patches will be affected in the same way by shading)
Contrast	TE269A / TE269B: 1,000,000:1 / 120 dB / 20 f-stops TE269C: 5,000,000:1 / 134 dB / 22 f-stops ☐ other: _____
Quality	☐ Standard version ☐ X-version
Number of steps	36
Arrangement of steps	TE269A V3: according to ISO 14524 TE269B V3: Image Engineering's version shifts more steps to higher density levels TE269C V3: according to upcoming IEC 62676-5 standard
Values that can be gathered from analysis	• OECF / gamma curve • dynamic range • noise • temporal noise • visual noise • SNR • ISO speed of the camera

General description hardware

Type	transmissive
Aspect ratio	16:9 (can be used for other aspect ratios without restrictions)
Chart size tolerances	+/- 2 mm as they are handmade in house and depends on edge protection type
Chart size [W x H x D]	W [mm] / H [mm] / D [mm] ☐ D280: 360 / 280 / 4.6 / 9.2 (screw area) ☐ other
Picture size	4:3: W [mm] / H [mm]; 16:9: W [mm] / H [mm] ☐ D280: 280 / 210 / 280 / 157.5 ☐ other
Patch size	16 x 16 mm metal frame dimension
Material	photographic film
Mounting	black anodized aluminum metal frames
Edge protection	fabric tape
Service life	3 years
Scope of delivery	test chart, stable cardboard envelope to store the chart, air blower, acceptance protocol

Miscellaneous

Evaluation / Assessment	supported by iQ-Analyzer
Standards	ISO 14524:2009 Methods for measuring opto-electronic conversion functions (OECFs) (TE269A V2 only) ISO 15739:2013 Noise measurements ISO 12232:2006 Determination of exposure index, ISO speed ratings, standard output sensitivity, and recommended exposure index IEC 62676-5 Video surveillance systems for use in security applications – Part 5: Data specifications and image quality performance for camera devices, this chart is adapted to the postulated requirements. (TE269C V2 only; standard not yet published)
Accessories	PCR Krochmann Radiolux 111: luminance meter (tele-luminance meters can only be used in combination with a mask that covers the whole chart except the measured patch).

TE269A V3 D

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Acceptance protocol

SN:
Date:
Operator:

Optical density (OD) values gray patches*

Patch	Reference OD	Measured OD	Deviation
1 (white)	0,11		
2	0,15		
3	0,19		
4	0,23		
5	0,27		
6	0,31		
7	0,35		
8	0,40		
9	0,44		
10	0,49		
11	0,54		
12	0,60		
13	0,65		
14	0,71		
15	0,77		
16	0,83		
17	0,90		
18	0,96		
19	1,04		
20	1,11		
21	1,20		
22	1,28		
23	1,38		
24	1,48		
25	1,59		
26	1,71		
27	1,84		
28	1,99		
29	2,16		
30	2,35		
31	2,57		
32	2,84		
33	3,18		
34	3,64		
35	4,36		
36 (black)	6,11		
BG	2,13		

* values gathered with diffuse illumination

Signature

TE269B V3 D

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Acceptance protocol

SN:
Date:
Operator:

Optical density (OD) values gray patches*

Patch	Reference OD	Measured OD	Deviation
1 (white)	0,11		
2	0,14		
3	0,18		
4	0,22		
5	0,25		
6	0,33		
7	0,41		
8	0,50		
9	0,60		
10	0,70		
11	0,81		
12	0,93		
13	1,07		
14	1,22		
15	1,39		
16	1,58		
17	1,76		
18	1,91		
19	2,09		
20	2,27		
21	2,45		
22	2,61		
23	2,78		
24	2,94		
25	3,14		
26	3,34		
27	3,53		
28	3,76		
29	4,03		
30	4,33		
31	4,62		
32	4,92		
33	5,22		
34	5,52		
35	5,81		
36 (black)	6,11		
BG	2,11		

* values gathered with diffuse illumination

Signature

TE269C V3 D

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Acceptance protocol

SN:
Date:
Operator:

Optical density (OD) values gray patches*

Patch	Reference OD	Measured OD	Deviation
1 (white)	0,11		
2	0,21		
3	0,31		
4	0,41		
5	0,61		
6	0,81		
7	1,01		
8	1,21		
9	1,41		
10	1,61		
11	1,81		
12	2,01		
13	2,21		
14	2,41		
15	2,61		
16	2,81		
17	3,01		
18	3,21		
19	3,41		
20	3,61		
21	3,81		
22	4,01		
23	4,21		
24	4,41		
25	4,61		
26	4,81		
27	5,01		
28	5,21		
29	5,41		
30	5,61		
31	5,81		
32	6,01		
33	6,21		
34	6,41		
35	6,61		
36 (black)	6,81		
BG	4,11		

* values gathered with diffuse illumination

Signature