## **NOCTURN XS COLOR**





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SPECIFICATION SHEET Nocturn XS color



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## 1 Key technical specifications of Nocturn XS color (Parallel LVCMOS) model

| Features                        | Parameters                                      |              |      |          |       |  |  |
|---------------------------------|---|--------------|------|----------|-------|--|--|
| Camera                          |   |              |      |          |       |  |  |
| Туре                            | Nocturn XS Colour                               |              |      |          |       |  |  |
| Video Output                    | Parallel LVCMOS                                 |              |      |          |       |  |  |
| Front Mount                     | Thread 1-72                                     |              |      |          |       |  |  |
| Communication                   | Serial  |              |      |          |       |  |  |
| Digital Zoom                    | 1-8X  |              |      |          |       |  |  |
| Image Processing                | Noise removal, sharpening, contrast enhancement |              |      |          |       |  |  |
| Gain and Exposure               | Fully automatic or manual                       |              |      |          |       |  |  |
| Input Voltage                   | 4.5 VDC fixed or variable 2.5 VDC to 5.5 VDC    |              |      |          |       |  |  |
| Power                           | 1.5 W typical                                   |              |      |          |       |  |  |
| Dimensions                      | 34 mm x 37 mm x 18 mm                           |              |      |          |       |  |  |
| Weight                          | < 45 g  |              |      |          |       |  |  |
|                                 |   |              |      |          |       |  |  |
| Sensor                          |   |              |      |          |       |  |  |
| Туре                            | CMOS LY   | /NX 1.3 MPix |      |          |       |  |  |
| Resolution                      | 1280 x 1024                                     |              |      |          |       |  |  |
| Pixel Pitch                     | 9.7 μm x 9.7 μm                                 |              |      |          |       |  |  |
| Format"                         | 1" (16mm diagonal)                              |              |      |          |       |  |  |
| Frame Rate                      | Up to 100 Hz full frame                         |              |      |          |       |  |  |
| Shutter mode                    | Rolling Shutter                                 |              |      |          |       |  |  |
| Spectral range                  | 350 – 1100 nm                                   |              |      |          |       |  |  |
| Read noise                      | < 4 e⁻ rm                                       | IS           |      |          |       |  |  |
|                                 |   |              |      |          |       |  |  |
| Test operating conditions       | Camera tests                                    |              |      |          |       |  |  |
| Output board used               | Nocturn XL IO board                             |              |      |          |       |  |  |
| Operating supply voltage        | +5 V over USB                                   |              |      |          |       |  |  |
| Ambient temperature             | 27 +/- 2°C                                      |              |      |          |       |  |  |
| Operating video output format   | Camera Link 60 fps                              |              |      |          |       |  |  |
|                                 |   |              |      |          |       |  |  |
| Performance parameter           | Min.  | Тур.         | Max. | Unit     | Type* |  |  |
| Intrascene dynamic range        |   | 60           |      | dB       | Q     |  |  |
| Startup time                    |   | 5            |      | S        | Q     |  |  |
| Image lag                       |   |              | 0.1  | %        | Q     |  |  |
| Operability                     | 99.5  |              |      | %        | A     |  |  |
| Conversion gain                 |   |              | 6    | e⁻/DN    | A     |  |  |
| Dark current                    |   |              | 800  | e⁻/pix/s | A     |  |  |
| Read noise                      |   |              | 4    | e⁻       | A     |  |  |
| * Q = qualification measurement | nt; A = ATR                                     | measuremen   | t    |          |       |  |  |
| Environmental limits            |   |              |      |          |       |  |  |
| Temperature, operational        | -40°C to  | +60°C        |      |          |       |  |  |
| i chipelature, operational      |   |              |      |          |       |  |  |

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| Shock            | 500 G, 0.5 ms |                           |   |   |   |  |  |  |
|------------------|---------------|---------------------------|---|---|---|--|--|--|
| Vibration        | 2 Grms,       | 2 Grms, 5 – 55 Hz, Random |   |   |   |  |  |  |
|                  |               |                           |   |   |   |  |  |  |
| Image defects    | Region        |                           |   |   |   |  |  |  |
|                  | 1             | 2                         | 3 | 4 | 5 |  |  |  |
| Bad rows         | 0             | 0                         | 0 | 0 | 0 |  |  |  |
| Bad columns      | 2             | 1                         | 0 | 0 | 1 |  |  |  |
| Type 2 Cluster   | 25            | 8                         | 5 | 2 | 8 |  |  |  |
| Type 3 Cluster   | 10            | 4                         | 2 | 0 | 4 |  |  |  |
| Type 4 Cluster   | 0             | 0                         | 0 | 0 | 0 |  |  |  |
| Default settings |               |                           |   |   |   |  |  |  |
| Framerate 1      | 60 fps        |                           |   |   |   |  |  |  |
| Framerate 2      | 50 fps        |                           |   |   |   |  |  |  |
|                  |               |                           |   |   |   |  |  |  |

(For internal reference: PHO-000004, DCNC004\_01, 184-D073A0)

Table 1: Key technical specifications

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