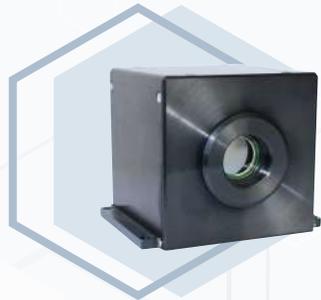


Technical vision cameras

Unified television camera. Modification UTC-UV2



Spectral range: $0,2 \div 0,3 \mu\text{m}$
 Number of pixels: 768×580 (290)
 Pixel size: $17 \times 34 \mu\text{m}$
 Photosensitive area size: $13,1 \times 9,8 \text{ mm}$
 Frame frequency: **50 Hz**
 Threshold irradiance (at $\lambda = 285 \text{ nm}$): $5 \cdot 10^{-11} \text{ W/cm}^2$
 Operating irradiance: $\geq 1 \cdot 10^{-10} \text{ W/cm}^2$
 Device dimensions (without lens): $97 \times 80 \times 90 \text{ mm}$
 Resolution at operating irradiance: $\geq 400 \text{ TVL}$
 Weight: **0,64 kg**

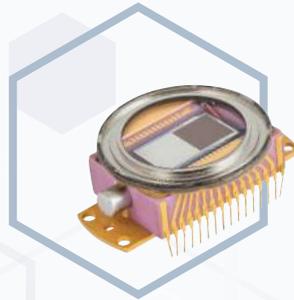
Unified television camera. Modification UTC-4



Spectral range: $0,95 \div 1,65 \mu\text{m}$
 Electron-sensitive CCD pixel number: 768×580 (290)
 Pixel size: $17 \times 34 \mu\text{m}$
 Sensitive area size: $13,1 \times 9,8 \text{ mm}$
 Frame frequency: **50 (100) Hz**
 Dark current: $\leq 100 \text{ nA/cm}^2$
 Photocathode voltage: $\leq 2 \text{ kV}$
 Threshold irradiance: $\leq 5 \cdot 10^{-10} \text{ W/cm}^2$
 Interfaces: **mini USB 2.0**
 Dimensions (without lens): $80 \times 80 \times 161 \text{ mm}$
 Weight: **0,8 kg**

Photoelectronic sensors

Photosensitive device CCD 34M «Star tracker»



Spectral range: $0,45 \div 1,0 \mu\text{m}$
 Number of pixels: 1024×1024
 Pixel size: $11 \times 11 \mu\text{m}$
 Saturation voltage: $\geq 1000 \text{ mV}$
 Average dark signal: $\leq 4 \text{ mV/sec}$
 RMS ripple dark signal across the field: $\leq 4\%$
 Threshold exposure (with accumulation time up to 1 second): $\leq 2 \cdot 10^{-5} \text{ lx-sec}$
 Integral sensitivity normalized to type A source: $10 \div 15 \text{ V/(lx-sec)}$
 Modulation transmission ratio at around 500 TVL horizontally: $\geq 50\%$
 Suppression ratio of local overshoot: **2 relative units**

X-ray tube with photocathode



Tube diameter:

- **without Be window: 44 mm**
- **with Be window: 55 mm**

Focus size (is specified):

- **without Be window: $0,8 \times 1,2 \text{ mm}$**
- **with Be window: $1 \times 2 \text{ mm}$**

Voltage:

- **without Be window: $3 \div 40 \text{ kV}$**
- **with Be window: $3 \div 100 \text{ kV}$**

Anode current: $0,01 \div 1 \text{ mA}$
 Operation speed: $< 1 \cdot 10^{-7} \text{ sec}$
 Power:

- **without Be window: $\leq 40 \text{ W}$**
- **with Be window: $\leq 100 \text{ W}$**

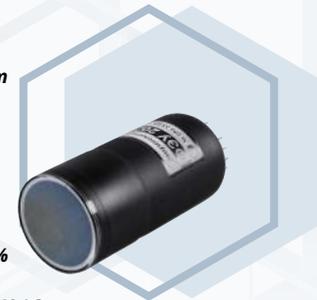
Vacuum photoelectronic devices

Radiation hard vidicon LI501-1MK

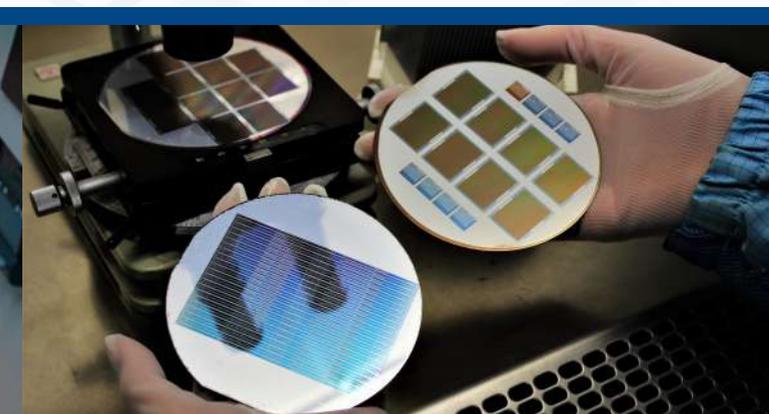


Target active area: $6,6 \times 8,8 \text{ mm}$
 Length of the device: $\leq 90 \text{ mm}$
 Diameter: $17,8_{\pm 0,2} \text{ mm}$
 Mass: $\leq 18 \text{ g}$
 Heater voltage: **6,3 V**
 Heater current: **$80 \div 115 \text{ mA}$**
 Nominal target illumination: **1 lx**
 Resolution at the center: $\geq 600 \text{ TVL}$
 Maximum target illumination: **4 lx**
 Exposure dose rate: $\leq 1 \cdot 10^5 \text{ rad/h}$
 Dark current: $\leq 0,003 \mu\text{A}$
 Dark noise nonuniformity: $\leq 15 \%$
 Decay lag after 40 ms: $\leq 14 \%$
 The device operates in conditions of increased

Photomultiplier tube PMT 202



Photocathode material: **SbKNaCs**
 Spectral range: $0,2 \div 0,75 \mu\text{m}$
 Photocathode diameter: **40 mm**
 Supply voltage: **2,2 kV**
 Anode luminous sensitivity: $\geq 300 \text{ A/lm}$
 Limiting supply voltage: $\leq 2400 \text{ V}$
 Limiting average anode current: $\leq 5 \cdot 10^{-4} \text{ A}$
 Dark current: $\leq 5 \cdot 10^{-7} \text{ A}$
 Anode luminous nonlinearity in pulse mode at anode current amplitude of 0,6 A and pulse of (1-100) μs : $\leq 20 \%$
 Average anode current: **$(3 \div 3,2) \cdot 10^{-5} \text{ A}$**
 Operation temperature range: $-10 \div +40 \text{ }^\circ\text{C}$

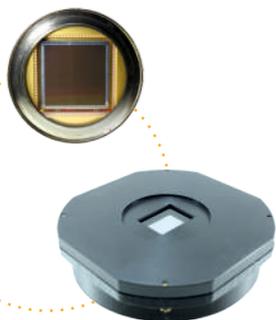


PRODUCTS

VACUUM PHOTOELECTRONIC DEVICES



SOLID-STATE PHOTOELECTRONIC DEVICES



TECHNICAL VISION CAMERAS



ABOUT US



manufacturing complex



more than 1000 patents



testing and engineering center



scientific laboratories



more than 400 specialists

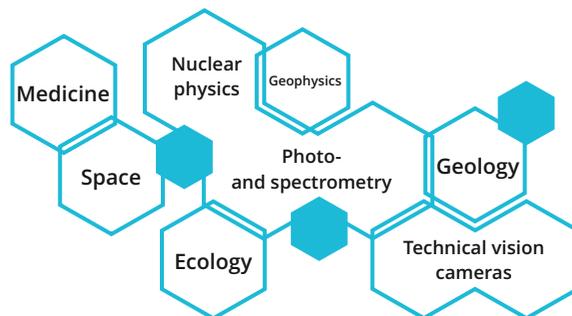


ELECTRON

Full range of solutions



AREAS OF APPLICATION



DEVELOPMENT AND PRODUCTION OF PHOTOELECTRONIC DEVICES

194223, St. Petersburg,
Thorez Avenue,
building 68

+7 (812) 297-82-49

info@nielectron.ru