

# RocketCam ED360000 Series Video Cameras

## **General Description**

The ED360000 series are small ruggedized color cameras to image dynamic events in harsh environments such as rockets, spacecraft and other remote platforms.

## Applications \_

- Externally mounted cameras in pods/fairings:
  - Used to image rocket during ascent providing video of rocket plumes and the receding Earth
  - Provide video of separation and launch deployment events; while obtaining valuable engineering confirmation of vehicle dynamics and status
  - Perform well even with the Sun in the FOV. Fast response to step changes in illumination provides exceptional coverage of key events and deployments
- Internally mounted cameras on simple brackets:
  - Used to obtain video of separations and deployments from within the launch vehicle
  - Provide ongoing confirmation of deployment and status from orbit

### Features \_\_\_\_\_

- COTS CCD-based unit
  - Selected for small size, CCD and AGC
  - Ruggedized using proprietary procedures
  - Outputs: NTSC or PAL
- Aperture fixed for best balance between sensitivity (daylight operation) and depth of field
- Cameras built into external "Camera Pod" or mounted on bracket
  - Pod isolates camera from aerodynamic, thermal, vibe stress.
  - Bracket provides rigid support
- Compatible with Ecliptic Analog (AVS) and Digital Video Systems (DVS)
- Approved for use on multiple launch vehicles and spacecraft
  - Delta II, III and IV
  - Atlas 2, 3 and 5
  - Shuttle ET and SRBs
  - Various missile-defense target vehicles
  - Various spacecraft buses
  - Commercial vehicles like SpaceShipOne







#### Specifications

Focal Plane	<sup>1</sup> / <sub>2</sub> " color CCD	Temperature	Storage: - 53 to +100°C
Scanning	Interleaved, 30fps		Operating: - 40 to 80°C
Pixels, Effective	NTSC 768 x 494 (PAL 752 x 582 )	Humidity	Storage: 20 - 90%
Shutter	1/60 to 1/4000 sec (Auto CCD Iris)	(non condensing)	Operating. 20 0070
Speed	1/60 to 1/100,000 sec (RS232 fixed)	Size	22 x 22 x 75 mm
Frame Rate	30 fps	Mass	84 a
Sync	Internal or External	Mass	of g
Minimum	3 lux (F1.2, AGC ON)	Power	10.5 - 15 V, 2.4 W
Illumination		Mounting	External (fairing)
Sensitivity	2000 lux @ F8, AGC OFF (0dB)	wounting	Internal (bracket)
Gain Control	AGC (0 - 18dB)/Fixed (0 dB)		
White	AutoTrace, 3200K, 5600K &		
Balance	Manual		
Video Out	VBS: 1 V p-p, 75 Z, sync negative		
	Y: 1 V p-p, 75 Z, C: Level depends		
	on VBS output		
Video S/N	48 dB		

Lens Options:

Focal Length	FOV (full-angle)		
	Н	V	
[mm]	[degree]	[degree]	
3.5	107.0	80.0	
6	57.8	44.1	
12	30.0	22.4	
25	14.3	10.7	
50	7.2	5.4	

#### Application Examples



RocketCam Digital Video System

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