

# VIIRS Spectral, Spatial, and Radiometric Characteristics

		Specification							On orbit performance		
Reflective Bands	Band No.	Driving EDR(s)	Spectral Range (μm)	Horiz Sample Interval (km) (track x Scan)		Band Gain	Ltyp or Ttyp (Spec)	Lmax or Tmax	Spec SNR or NEdT (K)	Measured SNR or NEdT (K)	SNR Margin (%)
				Nadir	End of Scan						
Vis/NIR	M1	Ocean Color Aerosol	0.402 - 0.422	0.742 x 0.259	1.60 x 1.58	High	44.9	135	352	578	64.2%
	M2	Ocean Color Aerosol	0.436 - 0.454	0.742 x 0.259	1.60 x 1.58	High	40	127	380	564	48.5%
	M3	Ocean Color Aerosol	0.478 - 0.498	0.742 x 0.259	1.60 x 1.58	High	32	107	416	611	46.5%
	M4	Ocean Color Aerosol	0.545 - 0.565	0.742 x 0.259	1.60 x 1.58	High	21	78	362	522	44%
	I1	Imagery EDR	0.600 - 0.680	0.371 x 0.387	0.80 x 0.789	Single	22	718	119	215	81%
	M5	Ocean Color Aerosol	0.662 - 0.682	0.742 x 0.259	1.60 x 1.58	High	10	59	242	321	33%
	M6	Atmosph. Correct	0.739 - 0.754	0.742 x 0.776	1.60 x 1.58	Single	9.6	41	199	355	78.7%
	I2	NDVI	0.846 - 0.885	0.371 x 0.387	0.80 x 0.789	Single	25	349	150	251	67.7%
Snow/MIR	M7	Ocean Color Aerosol	0.846 - 0.885	0.742 x 0.259	1.60 x 1.58	High	6.4	29	215	435	102%
						Low	33.4	349	340	636	87%
	M8	Cloud Particle Size	1.230 - 1.250	0.742 x 0.776	1.60 x 1.58	Single	5.4	165	74	233	215%
	M9	Cirrius/Cloud Cover	1.371 - 1.386	0.742 x 0.776	1.60 x 1.58	Single	6	77.1	83	231	179%
	I3	Binary Snow Map	1.580 - 1.640	0.371 x 0.387	0.80 x 0.789	Single	7.3	72.5	6	149	2383%
	M10	Snow Fraction	1.580 - 1.640	0.742 x 0.776	1.60 x 1.58	Single	7.3	71.2	342	550	60.9%
	M11	Clouds	2.225 - 2.275	0.742 x 0.776	1.60 x 1.58	Single	0.12	31.8	10	21.8	118%
Emissive Bands	I4	Imagery Clouds	3.550 - 3.930	0.371 x 0.387	0.80 x 0.789	Single	270	353	2.5	0.4	84.0%
	M12	SST	3.660 - 3.840	0.742 x 0.776	1.60 x 1.58	Single	270	353	0.396	0.13	67%
	M13	SST	3.973 - 4.128	0.742 x 0.259	1.60 x 1.58	High	300	343	0.107	0.042	60%
		Fires					380	634	0.423	--	--
LWIR	M14	Cloud Top Properties	8.400 - 8.700	0.742 x 0.776	1.60 x 1.58	Single	270	336	0.091	0.06	34%
	M15	SST	10.263 - 11.26	0.742 x 0.776	1.60 x 1.58	Single	300	343	0.07	0.03	57%
	I5	Cloud Imagery	10.500 - 12.40	0.371 x 0.387	0.80 x 0.789	Single	210	340	1.5	0.4	73%
	M16	SST	11.538 - 12.48	0.742 x 0.776	1.60 x 1.58	Single	300	340	0.072	0.03	58%

HSI uses 3 in-scan pixels aggregation at Nadir

Source: VIIRS user's guide. On orbit values (last two columns for March 8, 2012) are updated based on the Murphy table for RSB, provided by Aerospace; TEB values are provided by STAR and NASA.