

Effective aperture (m)	Effective aperture (in)	Mirror type	Name	Site	Built
10.4 m	409"	Segmented, 36	Gran Telescopio Canarias (GTC)	Roque de los Muchachos Obs., Canary Islands, Spain	2006/9
10 m	394"	Segmented, 36	Keck 1	Mauna Kea Observatories, Hawaii, USA	1993
10 m	394"	Segmented, 36	Keck 2	Mauna Kea Observatories, Hawaii, USA	1996
9.8 m	386"	Segmented, 91	Southern African Large Telescope (SALT)	South African Astronomical Obs., Northern Cape, South Africa	2005
9.2 m	362"	Segmented, 91	Hobby-Eberly Telescope (HET) (11 m × 9.8 m mirror)	McDonald Observatory, Texas, USA	1997
8.4 m×2 (can use Phased-array optics for combined 11.9 m ^[2])	330"×2	Multiple mirror, 2	Large Binocular Telescope (LBT)	Mount Graham Internationals Obs., Arizona	2004
8.2 m	323"	Single	Subaru (JNL T)	Mauna Kea Observatories, Hawaii, USA	1999
8.2 m	323"	Single	VLT UT1 (Antu)	Paranal Observatory, Antofagasta Region, Chile	1998
8.2 m	323"	Single	VLT UT2 (Kueyen)	Paranal Observatory, Antofagasta Region, Chile	1999
8.2 m	323"	Single	VLT UT3 (Melipal)	Paranal Observatory, Antofagasta Region, Chile	2000
8.2 m	323"	Single	VLT UT4 (Yepun)	Paranal Observatory, Antofagasta Region, Chile	2001
8.1 m	318"	Single	Gemini North (Gillett)	Mauna Kea Observatories, Hawaii, USA	1999
8.1 m	318"	Single	Gemini South	Cerro Pachón (CTIO), Coquimbo Region, Chile	2001
6.5 m	256"	Honeycomb	Magellan 1 (Walter Baade)	Las Campanas Obs., Coquimbo Region, Chile	2000
6.5 m	256"	Honeycomb	Magellan 2 (Landon Clay)	Las Campanas Obs., Coquimbo Region, Chile	2002
6.5 m	256"	Single	MMT (1 x 6.5 M1)	F. L. Whipple Obs., Arizona, USA	2000
6 m	238"	Single	BTA-6	Special Astrophysical Obs., Karachay–Cherkessia, Russia	1975
6 m	236"	Liquid	Large Zenith Telescope (LZT)	Maple Ridge, British Columbia, Canada	2003

Effective aperture (m)	Effective aperture (in)	Mirror type	Name	Site	Built
5.08 m	200"	Single	Hale Telescope (200 inch)	Palomar Observatory, California, USA	1948
4.9 m–3.6 m[5]	193"	Segmented, (37 + 24)	LAMOST (6.67 m × 6.05 m + 5.72 m × 4.40 m corrector; effective aperture 3.6–4.9 m)	Beijing Astronomical Obs., Xinglong, China	2008
4.7 m (6×1.8 m)	186"	Segmented, 6	MMT (6×1.8 m) original optics	F. L. Whipple Obs., Arizona, USA	1979–1998
4.3 m	169"	Single	Discovery Channel Telescope	Lowell Observatory, Happy Jack, Arizona	2012
4.2 m	165"	Single	William Herschel Telescope	Roque de los Muchachos Obs., Canary Islands, Spain	1987
4.1 m	161"	Single	SOAR	Cerro Pachón (CTIO), Coquimbo Region, Chile	2002
4.1 m	161"	Single	VISTA	Paranal Observatory, Antofagasta Region, Chile	2009
4 m	157"	Single	Victor M. Blanco Telescope	Cerro Tololo Inter-American Obs., Coquimbo Region, Chile	1976
3.89 m	154"	Single	Anglo-Australian Telescope (AAT)	Australian Astronomical Obs., New South Wales, Australia	1975
4 m	149.5"	Single	Nicholas U. Mayall 4m	Kitt Peak National Obs., Arizona, USA	1973
3.67 m	145"	Single	3.67m AEOS Telescope (AEOS)	Air Force Maui Optical Station, Hawaii, USA	1996
3.58 m	142"	Single	New Technology Telescope (NTT)	La Silla Observatory, Coquimbo Region, Chile	1989
3.58 m	141"	Single	Canada-France-Hawaii Telescope (CFHT)	Mauna Kea Observatories, Hawaii, USA	1979
3.58 m	141"	Single	Telescopio Nazionale Galileo (TNG)	Roque de los Muchachos Obs., Canary Islands, Spain	1997
3.57 m	140"	Single	ESO 3.6 m Telescope	La Silla Observatory, Coquimbo Region, Chile	1977
3.5 m	138"	Single	MPI-CAHA 3.5 m	Calar Alto Obs., Almería, Spain	1984
3.5 m	138"	Single	Space Surveillance Telescope	White Sands Missile Range, New Mexico, USA	2011

Effective aperture (m)	Effective aperture (in)	Mirror type	Name	Site	Built
3.5 m	138"	Single	USAF Starfire 3.5 m	Starfire Optical Range, New Mexico, USA	1994
3.5 m	138"	Single	WIYN Telescope	Kitt Peak National Obs., Arizona, USA	1994
3.48 m	137"	Single	Astrophysical Research Consortium (ARC)	Apache Point Obs., New Mexico, USA	1994
3.05 m	120"	Single	Shane Telescope	Lick Observatory, California, USA	1959
3.0 m	120"	Single	NASA Infrared Telescope Facility	Mauna Kea Observatory, Hawaii, USA	1979
3 m	118"	Liquid	NASA-LMT <i>retired</i>	NASA Orbital Debris Obs., New Mexico, USA	1995–2002
2.72 m	107"	Single	Harlan J. Smith Telescope	McDonald Observatory, Texas, USA	1969
2.65 m	104"	Liquid	UBC-Laval LMT	Vancouver, British Columbia, Canada	1992–
2.64 m	104"	Single	Shajn 2.6m	Crimean Astrophysical Obs., Ukraine	1961
2.61 m	102.8"	Single	VLT Survey Telescope (VST)	Paranal Observatory, Antofagasta Region, Chile	2007
2.6 m	102"	Single	BAO 2.6	Byurakan Astrophysical Obs., Mt. Aragatz, Armenia	1976
2.56 m	101"	Single	Nordic Optical Telescope (NOT)	ORM, Canary Islands, Spain	1988
2.54 m	100"	Single	Isaac Newton Telescope (INT)	ORM, Canary Islands, Spain (RGO, England, UK until '79)	1984
2.54 m	100"	Single	Irenee du Pont Telescope	Las Campanas Observatory, Coquimbo Region, Chile	1976
2.54 m	100"	Single	Hooker 100-Inch Telescope	Mt. Wilson Observatory, California, USA	1917
2.5 m	98.4"	Single	SOFIA	Boeing 747SP (mobile, USA)	2007
2.5 m	98.4"	Single	Sloan DSS	Apache Point Observatory, New Mexico, USA	1997
2.4 m	94.5"	Single	Hiltner Telescope	MDM Observatory (Kitt Peak), Arizona, USA	1986
2.4 m	94.5"	Single	Thailand National Telescope (TNT)	Chalermprakhiat Astronomical Observatory Commemorating King Bhumibhol's 7th Birthday Anniversary, Thailand	2012
2.4 m	94.5"	Single	Lijiang	Yunnan Astronomical Observatory, China	2008

Effective aperture (m)	Effective aperture (in)	Mirror type	Name	Site	Built
2.4 m	94.5"	Single	Hubble (HST)	Low Earth orbit	1990
2.4 m	94.5"	Single	2.4-meter SINGLE Telescope	Magdalena Ridge Observatory, New Mexico, USA	2006/2008
2.4 m	94.5"	Single	Automated Planet Finder	Lick Observatory, California, USA	2010
2.34 m	92.1"	Single	Vainu Bappu	Vainu Bappu Observatory, India	1986
2.3 m	90.6"	Single	Aristarchos	National Observatory of Athens, Mt. Helmos, Greece	2004
2.3 m	90.6"	Single IR	WIRO 2.3	Wyoming Infrared Observatory, Wyoming, USA	1977
2.3 m	90.6"	Single	ANU 2.3m ATT	Siding Spring Observatory, New South Wales, Australia	1984
2.3 m	90.6"	Single	Bok Telescope (90-inch)	Kitt Peak National Observatory, Arizona, USA	1969
2.24 m	88.2"	Single	University of Hawaii 2.2 m (UH88)	Mauna Kea Observatories, Hawaii, USA	1970
2.2 m	86.6"	Single	MPIA-ESO (ESO-MPI)	La Silla Observatory, Coquimbo Region, Chile	1984[8]
2.2 m	86.6"	Single	MPIA-CAHA 2.2m	Calar Alto Observatory, Almería, Spain	1979
2.16 m	85"	Single	Xinglong 2.16m	Xinglong, China	1989
2.15 m	84.6"	Single	Jorge Sahade 2.15m	Leoncito Astronomical Complex, San Juan Province, Argentina	1987
2.12 m	83.5"	Single	INAOE 2.12 (OAGH)	Guillermo Haro Observatory, Sonora, Mexico	1987
2.12 m	83.5"	Single	UNAM 2.12	National Astronomical Observatory, Baja California, Mexico	1979
2.1 m	82.7"	Single	Kitt Peak 2.1-meter	Kitt Peak National Observatory, Arizona, USA	1964
2.08 m	81.9"	Single	Otto Struve Telescope	McDonald Observatory, Texas, USA	1939
2.06 m	81.1"	Single	T13 Automated Spectroscopic Telescope	Fairborn Observatory, Arizona, USA	2003
2.01 m	79.1"	Single	Himalayan Chandra Telescope (HCT)	Indian Astronomical Observatory, India	2000

Effective aperture (m)	Effective aperture (in)	Mirror type	Name	Site	Built
2 m	78.7"	Single	Alfred Jensch Teleskop	Karl Schwarzschild Observatory, Germany	1960
2 m	78.7"	Single	Carl Zeiss Jena	Shamakhi Astrophysical Obs., Azerbaijan	1966
2 m	78.7"	Single	Ondřejov 2-m	Ondřejov Observatory, Czech	1967
2 m	78.7"	Single	Ritchey-Chretien-Coude (RCC)	Rozhen Observatory, Bulgaria	1984
2 m	78.7"	Single	Carl Zeiss Jena	Main Ukraine Obs., Ukraine	
2 m	78.7"	Single	Bernard Lyot Telescope	Pic du Midi Obs., France	1980
2 m	78.7"	Single	Liverpool Telescope	ORM, Canary Islands, Spain	2003
2 m	78.7"	Single	Faulkes Telescope North	Haleakala Observatory, Hawaii, USA	2003[18]
2 m	78.7"	Single	Faulkes Telescope South	Siding Spring Observatory, New South Wales, Australia	2001
2 m	78.7"	Single IR	MAGNUM	Haleakala Observatory, Hawaii, USA	2001–2008
125 cm	49.21"	Fixed lens, scrapped. Aimed via a 2m reflecting siderostat	Great Paris Exhibition Telescope of 1900	Paris 1900 Exposition	1900 Disman- tled 1900
102 cm	40"	Largest in current operation.	Yerkes Observatory	Williams Bay, Wisconsin, USA	1897
98 cm	39.37"	Single element non-achromatic objective combined with reflective Adaptive optics and a Schupmann corrector.	Swedish 1-m Solar Telescope, ORM	La Palma, Spain	2002
91 cm	36"		James Lick telescope, Lick Observatory	Mount Hamilton, California, USA	1888
83 cm + 62 cm	32.67" + 24.40"	Double telescope	Grande Lunette, Paris Observatory	Meudon, France	1891

Effective aperture (m)	Effective aperture (in)	Mirror type	Name	Site	Built
80 cm + 50 cm	31.5" + 29.5"	Double telescope	Großer Refraktor, Astrophysical Observatory Potsdam	Potsdam, Deutsches Kaiserreich	1899
77 cm	30.3"	Biscoffschei m funded	Grande Lunette, Nice Observatory, since 1988 Côte d'Azur Observatory	Nice, France	1886
76 cm	30"	Brashear made, photographic	William Thaw Telescope, Allegheny Observatory, University of Pittsburgh	Pittsburgh, Pennsylvania, USA	1914
76 cm	30"	Destroyed during WWII, only lens (made by Alvan Clark & Sons) survives.	Pulkovo observatory	Saint Petersburg, Russian Empire	1885
71 cm	28"		28-inch Grubb Refractor, Royal Greenwich Observatory	Greenwich, London, Great Britain	1894