

Dimensions, External

Wing span	12.00 m (39 ft 4 in)
Wing chord: basic, constant	1.32 m (4 ft 4 in)
over 10° fixed flaps	1.45 m (4 ft 9 in)
Wing aspect ratio	9.09
Length overall	8.15 m (26 ft 9 in)
Height over fan shroud	1.98 m (6 ft 6 in)
Diameter of fan shroud	1.68 m (5 ft 6 in)
Diameter of fan	1.21 m (3 ft 11¾ in)
Shroud ground clearance	0.25 m (10 in)
Height over tailplane	2.31 m (7 ft 7 in)

Tail unit span:	
c/l of tailbooms	3.40 m (11 ft 2 in)
intersection fin chord	2.60 m (8 ft 6½ in)
Wheel track	3.40 m (11 ft 2 in)
Wheelbase	2.73 m (9 ft 0 in)

Doors (each):

Long axis	1.35 m (4 ft 5 in)
Short axis	1.96 m (3 ft 1¾ in)
Height to sill	0.51 m (1 ft 8 in)

Dimensions, Internal

Cabin: Length	2.44 m (8 ft 0 in)
Max width (to door Perspex)	1.68 m (5 ft 6 in)
Max height	1.35 m (4 ft 5 in)
Floor area	0.72 m ² (7.75 sq ft)

Areas:

Wings, gross	15.84 m ² (170.5 sq ft)
Ailerons (total)	1.55 m ² (16.68 sq ft)

Trailing-edge flaps:

inboard (total)	0.61 m ² (6.57 sq ft)
outboard (total)	1.59 m ² (17.12 sq ft)
Fins (total)	1.98 m ² (21.31 sq ft)
Rudders (total)	1.10 m ² (11.84 sq ft)
Tailplane	1.62 m ² (17.44 sq ft)
Elevator, incl tab	1.26 m ² (13.56 sq ft)

Fuel and Oil Capacities

Fuel Tanks	One each wing leading edge
Usable capacity	250 litres (66.0 US gals; 55.0 Imp gals)
Unusable	6 litres (1.6 US gals; 1.3 Imp gals)
Oil capacity	7.6 litres (2.0 US gals; 1.7 Imp gals)

Engine and Fan Type

Engine: Lycoming IO-540-4A5D	194 kW (260 hp)
Fan:	Hoffmann 5 blade fixed-pitch

Weights and Loadings:

Weight empty, equipped	948 kg (2,090 lb)
Max baggage weight	30 kg (66 lb)
Max passenger weight	227 kg (500 lb)
Max combined cabin load	231 kg (510 lb)
Max T-O and landing weight	1,315 kg (2,900 lb)
Max zero-fuel weight	1,240 kg (2,734 lb)
Max wing loading	83 kg/m ² (17 lb/sq ft)
Max power loading	6.78 kg/kW (11.2 lb/hp)

Performance (at max T-O weight, forward limit CG)

Never-exceed speed (Vne)	140 kt (259 km/h; 161 mph)
Max level speed	115 kt (213 km/h; 132 mph)

Cruising speed:

50% power	86 kt (159 km/h; 99 mph)
70% power	103 kt (191 km/h; 119 mph)
Loiter speed (40% power)	70 kt (130 km/h; 81 mph)
Stalling speed, flaps up	58 kt (108 km/h; 67 mph)

Max rate of climb at S/L	247 m (810 ft)/min
Service ceiling	4,275 m (14,000 ft)
Max certified altitude	3,960 m (13,000 ft)

T-O run	331 m (1,084 ft)
T-O to 15 m (50 ft)	472 m (1,548 ft)
Landing from 15 m (50 ft)	555 m (1,820 ft)
Landing run	278 m (912 ft)

Range with max fuel (45 min reserves):

at 70% power	334 n miles (619 km; 385 miles)
at 70 knots (130 km/h; 81 mph)	570 n miles (1,056 km; 656 miles)

Endurance (45 min reserves):

at 70% power	3 h 40 min
at 70 kt (130 km/h; 81 mph)	8 h

Stressed to g limits	+3.8/-1.5
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Certificated:

Europe (EASA) BCAR Sect K (non-aerobatic category)
USA FAR Pt 23 (Normal category).





The Optica is a three-seat observation aircraft, suited particularly for pipeline and powerline inspection, photography, crime prevention and pursuit, fire patrol, game spotting, Customs and Excise duties, pollution control, reconnaissance, narcotics control, disaster monitoring, survey, leisure and sightseeing, security escort, coastguard, search, accident control, police duties, film/TV and press reporting and any other duties where an exceptional air to ground view is needed. The 'Insect eye' cabin combines the all-round field of view of some helicopters with the lower operating costs of fixed-wing aircraft. The ducted fan propulsor offers very low vibration levels and exceptional quietness, both from within the cabin and from the ground.

A low wing loading, fixed inboard slotted flaps and generous outboard flaps give the Optica a low stalling speed for slow speed observation and a good short field performance.

The cabin is designed to accommodate up to three persons side by side with either single or two pilot operation (left hand and centre seats). Dual controls are standard and a baggage space is provided aft of the seats.

Certificate of Airworthiness in Europe (EASA), USA (FAA) and elsewhere.

Recent Major Press Reviews

"Flyer" October 2008 P16 "Optica - Bug-eyed in the Sky"
"info-pilote" (French) February 2009 P22 "Optica - Le retour de la libellule"
"General Aviation" (AOPA) April 2009 P26 "Optica Rises"
"Today's Pilot" October 2009 P66 Pilot Portrait
"Today's Pilot" February 2010 P20 "Eye in the Sky"

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Demonstrator Aircraft

G-BOPO is Operated by AeroElvira Limited

This aircraft was previously on lease to the Spanish Government and was engaged in forest fire monitoring.

Owned by John Edgley since Autumn 2007

Returned to Service Spring 2008

www.aeroelvira.co.uk