

SIEMENS



S70 Light Rail Vehicle

San Diego, California

Mobility



six-axle S70 light rail vehicle is equipped with two power trucks (one under each end) and a non-powered center truck.

The interior of this S70 LRV has been designed to maximize passenger space, incorporating a predominately knee-to-back seating arrangement. Each S70 LRV is equipped with eight wide opening sliding plug doors all located in the low-floor area, with four to each side of the vehicle. The door spacing has been

optimized to allow for greater passenger flow entering and exiting the vehicle, which ultimately decreases the station dwell times.

In addition to the maximized passenger space and wide doorways the vehicle is also equipped with four designated wheelchair spaces allowing for priority seating to disabled passengers and doorway rampsto assist in the boarding and exiting of disabled passengers.

According to US Industry data San Diego is cited as one the top 10 cities ranked among the best in the country for public transportation. San Diego opened its light rail system with a base fleet of 14 Siemens vehicles. The success of that initial order and the increase in overall ridership over the years has prompted San Diego to expand their system to include 54 miles of track and operate 134 Siemens light rail vehicles (LRV). In 2005 San Diego opened Mission Valley East line introducing low-floor operation with 11 Siemens S70s.

A steel carbody construction; fully bi-directional; double articulated; 70% low-floor vehicle, ideal for street-level operation and built in the USA. Each

Performance and Capacity

Maximum operational speed	55 mph	885 km/h
Maximum allowable speed	71.5 mph	120 km/h
Service acceleration and deceleration	3.0 mphps	1.34 m/s ²
Emergency braking rate	4.9 mphps	2.2 m/s ²
Passenger capacity	68 seats	
	Approx. 230 total passengers @ 6 p/m ²	
	4 wheelchair spaces and 2 bicycle racks	
Maximum operational gradient	7%	
Motor power rating	174 hp x 4	130 kW x 4
Catenary supply voltage	750 Vdc	

To accommodate San Diego's extensive bicycle population, this S70 incorporates four bicycle racks located adjacent to each doorway.

To maximize passenger comfort each vehicle is equipped with two roof-mounted HVAC units per LRV. The S70 utilizes a passenger information system consisting of operator and automated announcements, passenger-operator intercoms and interior and exterior electronic destination signs, as well as interior and exterior surveillance system for increased passenger safety.

The S70 LRV is electrically powered from an overhead wire system (catenary) and for San Diego operates at speeds up to 55 mph, carrying close to 230 passengers in each vehicle with the ability to operate in multiple vehicle consists (up to four). The S70 removes automobiles off the road in turn helping cities decrease their CO₂ emissions.

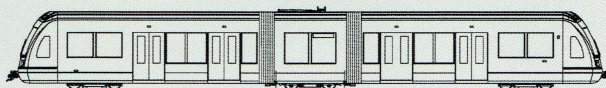
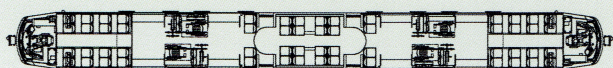
In 2013 Americans took 10.7 billion trips on public transportation, which is the highest annual public transit ridership number in 57 years, according

to a report released by America Public Transportation (APTA) in March 2014.



Vehicle Dimensions and Weight

Length over coupler	90.8 ft	28530 mm
Width	8.7 ft	2650 mm
Height with pantograph (locked down)	12.7 ft	3870 mm
Maximum pantograph height	up to 23 ft	7010 mm
Vehicle empty weight	99500 lbs (AWO)	45130 kg
High-floor section above TOR	2.2 ft (with 1 step plus slight ramp)	670 mm
Low-floor section above TOR	1.2 ft (threshold)	356 mm (threshold)
	1.3 ft (center)	396 mm (center)
Minimum turning radius	82 ft	25 m
Vertical curve, crest	820 ft	250 m
Vertical curve, sag	1150 ft	350 m
Track gauge	4.7 ft	1435 mm
Wheel base	6.2 ft (power trucks)	1900 mm (power trucks)
	5.9 ft (center truck)	1800 mm (center truck)



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