

## LEFT-HEART LEADS

# Quartet™ Family

Left-Heart Leads

### Product Highlights

- Designed to enable more electrode spacing options >30mm for improved CRT response<sup>1</sup>
- Proven Quartet™ LV lead performance with the most Quadripolar lead options to match a patient's anatomy
- The Quartet™ Family of LV leads offers more distal shape options including the Large-S, Small-S and the Double Bend and more total electrode spacing options including 40, 47 and 60 mm
- Four unique pacing electrodes to provide more options and greater control in pacing vector selection
- Superb deliverability with exceptional stability and performance
- Low profile—4,7 F lead body; 4,0 F lead tip
- Optim™ lead insulation—a co-polymer that blends the best features of polyurethane and silicone for improved handling and increased durability
- Steerable tip—distal tip angle can be controlled to maneuver through venous anatomy
- Flexible lead body—narrow ring electrodes provide lead tip flexibility
- Allows Direct-To-Target™ delivery placement through CPS Aim™ SL slittable inner catheter to deliver leads to small, acute venous anatomies that may have been unreachable in the past
- Compatible with over-the-wire or stylet approaches
- MRI Ready lead tested in combination with MR Conditional devices for full-body scans using a 1.5 T (Tesla) and 3T (as applicable) field strength scanner\*
- Allows patients to safely undergo an MRI scan when used in combination with an Abbott MRI Ready device<sup>2,3</sup>



### Ordering Information

Contents: Left-heart lead

MODEL NUMBER	SHAPE	TT	INSULATION	MINIMUM CURVE HEIGHT	MINIMUM INTRODUCER (F)	CONNECTOR	LENGTHS (CM)
1458QL	Large-S	60	Optim	16	5.9	IS4-LLLL	75; 86
1458Q	Traditional-S	47	Optim	16	5.9	IS4-LLLL	75; 86; 92
1456Q	Small-S	40	Optim	8	5.9	IS4-LLLL	75; 86
1457Q	Double Bend	47	Optim	16	5.9	IS4-LLLL	75; 86

\*For additional information about specific MR conditional device and lead model numbers, including warnings, precautions, adverse conditions to MRI scanning, and potential adverse events please refer to Abbott's MRI Ready Systems Manual at [medical.abbott/manuals](http://medical.abbott/manuals).

Product Specifications

PHYSICAL SPECIFICATIONS

Models	1458QL	1458Q	1456Q	1457Q
Connector	IS4-LLLL	IS4-LLLL	IS4-LLLL	IS4-LLLL
Lead Length	75; 86 cm	75; 86; 92 cm	75; 86 cm	75; 86 cm
Maximum Lead Size	5.1 F (1.70 mm/0.067") at the ring electrode	5.1 F (1.70 mm/0.067") at the ring electrode	5.1 F (1.70 mm/0.067") at the ring electrode	5.1 F (1.70 mm/0.067") at the ring electrode
Lead Body Size	4.7 F (1.57 mm/0.062")	4.7 F (1.57 mm/0.062")	4.7 F (1.57 mm/0.062")	4.7 F (1.57 mm/0.062")
Tip Electrode Size	4.0 F (1.3 mm/0.052")	4.0 F (1.3 mm/0.052")	4.0 F (1.3 mm/0.052")	4.0 F (1.3 mm/0.052")
LV Lead Delivery System	Minimum 5.9 F ID	Minimum 5.9 F ID	Minimum 5.9 F ID	Minimum 5.9 F ID
Introducer Size	16 mm	16 mm	8 mm	16 mm
Minimum Curve Height	16 mm	16 mm	8 mm	16 mm
Tip Electrode	Pt/Ir; TiN coated; ring-shaped; two grooves	Pt/Ir; TiN coated; ring-shaped; two grooves	Pt/Ir; TiN coated; ring-shaped; two grooves	Pt/Ir; TiN coated; ring-shaped; two grooves
Steroid	Dexamethasone sodium phosphate	Dexamethasone sodium phosphate	Dexamethasone sodium phosphate	Dexamethasone sodium phosphate
Tip Electrode Surface Area	4.9 mm <sup>2</sup>	4.9 mm <sup>2</sup>	4.9 mm <sup>2</sup>	4.9 mm <sup>2</sup>
Ring Electrode Surface Area	7.4 mm <sup>2</sup>	7.4 mm <sup>2</sup>	7.4 mm <sup>2</sup>	7.4 mm <sup>2</sup>
Electrode Spacing				
Distal tip 1 - Mid 2	20 mm	20 mm	20 mm	20 mm
Distal tip 1 - Mid 3	47 mm	30 mm	30 mm	30 mm
Distal tip 1 - Proximal 4	60 mm	47 mm	40 mm	47 mm
Lead Body Coating	Fast-Pass™ coating	Fast-Pass™ coating	Fast-Pass™ coating	Fast-Pass™ coating
Conductors				
Distal (coil)	MP35N <sup>†</sup> LT	MP35N <sup>†</sup> LT	MP35N <sup>†</sup> LT	MP35N <sup>†</sup> LT
Proximal (cables)	ETFE; MP35N LT	ETFE; MP35N LT	ETFE; MP35N LT	ETFE; MP35N LT
Suture Sleeve	Attached	Attached	Attached	Attached
MR Conditional	Yes, 86 cm only	Yes, 86 cm only	Yes, 86 cm only	Yes, 86 cm only

1. Niazi I, et al. Safety and efficacy of multipoint pacing in cardiac resynchronization therapy—the multipoint pacing trial. JACC. 2017;3(11):1519-1522. <http://dx.doi.org/10.1016/j.jacep.2017.06.022>. Accessed July 31, 2018.

2. Hayes, D., Freedman, R., Porterfield, J.G., Porterfield, L.M., Dinerman, J., Styperek, R., Machell, C., Kim, G., Curtis A.B. (2015). Absence of externalized conductors and electrical dysfunction in Durata leads: results from a prospective, multicenter study [abstract]. Presented at Heart Rhythm 2015. Boston, Massachusetts.

3. Wilkoff, B. L., Rickard, J., Tkatchouk, E., Padsalgikar, A. D., Gallagher, G., & Runt, J. (2015). The biostability of cardiac lead insulation materials as assessed from longterm human implants. Journal of Biomedical Materials Research Part B: Applied Biomaterials. 104(2), 411-421.

**Rx Only**

Brief Summary: Prior to using these devices, please review the Instructions for Use for a complete listing of indications, contraindications, warnings, precautions, potential adverse events and directions for use.

**Potential Adverse Events**

Potential adverse events associated with the use of left ventricular leads include: Allergic reaction to contrast media, Body rejection phenomena, Cardiac/coronary sinus dissection, Cardiac/coronary sinus perforation, Cardiac tamponade, Coronary sinus or cardiac vein thrombosis, Death, Endocarditis, Excessive bleeding, Hematoma/seroma, Induced atrial or ventricular arrhythmias, Infection, Lead dislodgment, Local tissue reaction; formation of fibrotic tissue, Loss of pacing and/or sensing due to dislodgment or mechanical malfunction of the pacing lead, Myocardial irritability, Myopotential sensing, Pectoral/diaphragmatic/phrenic nerve stimulation, Pericardial effusion, Pericardial rub, Pneumothorax/hemothorax, Prolonged exposure to fluoroscopic radiation, Pulmonary edema, Renal failure from contrast media used to visualize coronary veins, Rise in threshold and exit block, Thrombolytic or air embolism, Valve damage. Performance of a coronary sinus venogram is unique to lead placement in the cardiac venous system, and carries risks. Potential complications reported with direct subclavian venipuncture include hemothorax, laceration of the subclavian artery, arteriovenous fistula, neural damage, thoracic duct injury, cannulation of other vessels, massive hemorrhage, and rarely, death.

**Indications and Usage:** The Quartet™ leads are 5.1 French, transvenous, steroid eluting, quadripolar, IS4 compatible (single connector with four electrical terminals), passive fixation leads intended for permanent sensing and pacing of the left ventricle when used with a compatible Abbott Medical biventricular system with an IS4-LLLL lead receptacle designation.

**Contraindications:** The use of Quartet leads is contraindicated in patients who:

- Are expected to be hypersensitive to a single dose of 1.0 mg of dexamethasone sodium phosphate.
- Are unable to undergo an emergency thoracotomy procedure.
- Have coronary venous vasculature that is inadequate for lead placement, as indicated by venogram.

**Abbott**

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