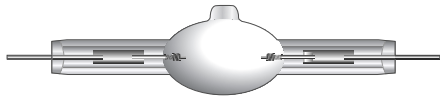




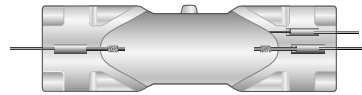
# Pulse Start Lamps Competitive Comparison



Formed Body

- More Light
- Superior Lumen Maintenance
- Longer Life

versus



Pinched Body

- Standard technology, over 35 years old

## 50 Watt

Company	Lamp Description	Arc Tube	Initial Lumens	Mean Lumens	Mean Lumens (%)	# of Lamp Designs
Venture	MH50W/U	Formed	3400	2600	75%	4
Philips	MH50/U/M	Pinched	3200	2560	80%	4
Osram/Sylvania	MP50/U/MED	Pinched	3450	1900	55%	2
General Electric	MVR50/U/MED	Shaped	3000	2000	67%	4

## 70 Watt

Company	Lamp Description	Arc Tube	Initial Lumens	Mean Lumens	Mean Lumens (%)	# of Lamp Designs
Venture	MH70W/U	Formed	5600	4200	75%	10
Philips	MH70/U/M	Pinched	5000	4000	80%	4
Osram/Sylvania	MP70/U/MED	Pinched	5200	3900	75%	2
General Electric	MVR70/U/MED	Shaped	4700	3400	72%	6

## 100 Watt

Company	Lamp Description	Arc Tube	Initial Lumens	Mean Lumens	Mean Lumens (%)	# of Lamp Designs
Venture	MH100W/U	Formed	9000	6800	75%	14
Philips	MH100/U/M	Pinched	7800	5850	75%	5
Osram/Sylvania	MP100/U/4K/MED	Pinched	8000	5800	72%	3
General Electric	MVR100/U/MED	Shaped	8100	5800	72%	6

## 150 Watt

Company	Lamp Description	Arc Tube	Initial Lumens	Mean Lumens	Mean Lumens (%)	# of Lamp Designs
Venture	MH150W/U/PS	Formed	15000	11300	75%	14
Philips	MH150/U/M	Pinched	12500	9000	72%	2
Osram/Sylvania	MP150/U/MED	Pinched	13300	10000	75%	2
General Electric	MVR150/U/MED	Shaped	11700	7850	67%	4

## 175 Watt

Company	Lamp Description	Arc Tube	Initial Lumens	Mean Lumens	Mean Lumens (%)	# of Lamp Designs
Venture	MS175W/BU/PS	Formed	17500	14000	80%	4
Philips	MS175/BU/PS	Pinched	16000	12400	77%	1
Osram/Sylvania	-	-	-	-	-	0
General Electric	MVR175/VBU/PA	Shaped	16800	13775	82%	8



# Pulse Start Lamps Competitive Comparison

## 200 Watt

Company	Lamp Description	Arc Tube	Initial Lumens	Mean Lumens	Mean Lumens (%)	# of Lamp Designs
Venture	MH200W/U/PS	Formed	21000	16800	80%	7
Philips	-	-	-	-	-	0
Osram/Sylvania	-	-	-	-	-	0
General Electric	-	-	-	-	-	0

## 250 Watt

Company	Lamp Description	Arc Tube	Initial Lumens	Mean Lumens	Mean Lumens (%)	# of Lamp Designs
Venture	MH250W/HBU/PS	Formed	26300	21000	80%	6
Philips	MS250/BU/PS	Pinched	18000	14200	79%	1
Osram/Sylvania	-	-	-	-	-	0
General Electric	MXR250/VBU/PA	Shaped	21500	16200	75%	2

## 320 Watt

Company	Lamp Description	Arc Tube	Initial Lumens	Mean Lumens	Mean Lumens (%)	# of Lamp Designs
Venture	MS320W/BU/ED28/PS	Formed	34000	27200	80%	10
Philips	MS320/BU/PS	Pinched	31400	24000	76%	2
Osram/Sylvania	MS320/PS/BU-Only	Pinched	32000	21000	66%	2
General Electric	-	-	-	-	-	0

## 350 Watt

Company	Lamp Description	Arc Tube	Initial Lumens	Mean Lumens	Mean Lumens (%)	# of Lamp Designs
Venture	MH350W/U/PS	Formed	38000	30400	80%	11
Philips	-	-	-	-	-	0
Osram/Sylvania	-	-	-	-	-	0
General Electric	-	-	-	-	-	0

## 400 Watt

Company	Lamp Description	Arc Tube	Initial Lumens	Mean Lumens	Mean Lumens (%)	# of Lamp Designs
Venture	MH400W/HBU/PS	Formed	44000	35200	80%	14
Philips	MS400/BU/PS	Pinched	44000	33000	75%	1
Osram/Sylvania	MS400/PS/BU-Only	Pinched	41000	32800	80%	2
General Electric	MVR400/VBU/PA	Shaped	44000	33900	77%	4

## 450 Watt

Company	Lamp Description	Arc Tube	Initial Lumens	Mean Lumens	Mean Lumens (%)	# of Lamp Designs
Venture	MS450W/BU/PS	Formed	50000	40000	80%	4
Philips	-	-	-	-	-	0
Osram/Sylvania	-	-	-	-	-	0
General Electric	-	-	-	-	-	0