



### Summary of Costs and Benefits of Using Electronic Ballasts

Internal Rate of Return		15,85%
Net Present Value	(Euro)	6,12
Simple Payback	(years)	4,86

#### Economic savings from using electronic ballasts

On installation	(Euro)	-8,10
In energy	(Euro/year)	1,47
In maintenance	(Euro/year)	0,20
In power	(Euro/year)	--

### General Economic Conditions

Real discount rate		3,00%
Unit energy costs (in real values)	(Euro/kWh)	0,10
Power costs (in real values)	(Euro/kW/year)	0,60
Base year for calculating prices and costs	year	2003

### Unit Costs

		Ballast Cost Ballast (2* 18W)		Lamp Cost
		Electromagnetic	Electronic	
<b>Component costs</b>				
List price	(Euro)	3,00	15,00	4,68
Discount on list price		10,00%	10,00%	10,00%
Discounted price	(Euro)	2,70	13,50	4,21

#### Labour costs

Labour costs (in real values)	(Euro/hour)	0,00
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### Hardware Description

		Ballast Type	
		Electromagnetic	Electronic
<b>Luminaire</b>			
Lamp power	(W)	36	32
No. of lamps/luminaire		2	2
Ballast power	(W)	10	7
No. of ballasts/luminaire		2	1
Luminaire power	(W)	92	71

#### System

Total number of luminaires		1	1
Total number of ballasts		2	1
Total number of lamps		2	2
Total system power	(kW)	0,092	0,071

<b>Usage</b>			
		Ballast Type	
		Electromagnetic	Electronic
Annual use	(hours/year)	700	700
Lifetime of system (luminaires)	(years)	10	10
<b>Installation Costs</b>			
Purchase of ballasts	(Euro)	5,40	13,50
<b>Annual Costs</b>			
<b>Maintenance costs</b>			
Average lamp life	(hours)	10 000	15 000
Total no. of lamp replacements over system lifetime		0,7	0,466666667
Total lamp costs over system lifetime	(Euro)	5,8968	3,93
Average time to replace lamp	(min)	5	5
Total labour costs over system lifetime	(Euro)	0,00	0,00
Total maintenance cost for system over system lifetime	(Euro)	5,8968	3,93
Average annual cost (in real values)	(Euro/year)	0,59	0,39
<b>Energy costs</b>			
Total no. of kWh absorbed by system each year	(kWh/year)	64,4	49,7
Annual cost (in real values)	(Euro/year)	6,44	4,97
<b>Power costs</b>			
Total number of kW absorbed by lighting system	(kW)	0,092	0,071
Factor of contemporaneity with peak load	(Euro)	1,00	1,00