

E-POWER MO with ENERGY LABELS

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E-Power Mo! Smart Energy Utilization Forum and Stakeholders Conference
29 November 2017 | Fontana Golden Pavillion, Clark Freeport Zone, Pampanga



Anong meron sa mga **Energy Labels**?

Ang **Energy LABELS** o **Energy Guides** ay mga kulay dilaw na etiketa na kalimitang makikita sa mga *appliances* at *lighting products*. May mga numero itong nagpapakita kung gaano ka-epektibo sa pagkonsumo ng kuryente ang mga kagamitang nabanggit

ENERGY GUIDE
NON-DUCTED AIR CONDITIONERS

10.5
ENERGY EFFICIENCY RATIO

For units with the same cooling capacity, higher EER means lower electricity cost.
For this model, the minimum EER standard set by the government is **8.6**.

The monthly operating cost of this model will be approximately:

RATED POWER DEMAND	X	MONTHLY USAGE	X	POWER RATE	=	COST OF OPERATION
watt/1000 (VA)		hours (h)		Perusa/W h		Price

111220305300

SINGER PHILIPPINES INC.

Brand : SINGER Rated Voltage : 230 volts
Model : REF-178A Rated Current : 0.90 ampere
Type : ONE DOOR Rated Frequency : 60 hertz
Total Storage Volume : 196 liters Energy Consumption: 0.84 kWh/24h
Rated Power Input : 116 watts

ENERGY GUIDE
REFRIGERATORS AND FREEZERS

246
ENERGY EFFICIENCY FACTOR

(At standard test condition)

higher EEF means lower operating cost

The daily operating cost of this model will be approximately:

Energy Consumption	X	Energy Cost	=	Cost of Operation
(kWh/24h)		(Pesos/kWh)		(Pesos per 24h)

REMOVAL OF THIS LABEL BEFORE CONSUMER PURCHASE IS A VIOLATION OF REPUBLIC ACT NO. 7394

111220305300

Brand Name : SINGER
Model/Type : Brightest
Wattage Rating : 36

2.6
BALLAST EFFICACY FACTOR

Lamp Specifications *

Light Output	900 lumens
Power Consumption	15 watts
Efficacy	60 lumens per watts
Average Life	8,000** hours

For lamps of similar light output, higher efficacy means more energy savings

** when tested at standard test conditions
*** rated average life at 50% failure

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111220305300

Based on standard test condition

2.6

BALLAST EFFICACY FACTOR

dti
DEPARTMENT OF TRADE AND INDUSTRY PHILIPPINES

0512-345678

Important: HIGHER BEF means HIGHER SAVINGS

Brand Name : LAMPS
Model/ Type : Brightest
Light output, lumens : 2880
Wattage rating, watts : 36

80
EFFICACY*
lumens/ watt

dti
DEPARTMENT OF TRADE AND INDUSTRY PHILIPPINES

0512-345678

Important! For lamps with same wattage rating, HIGHER EFFICACY means MORE ENERGY SAVINGS

THE MINIMUM EFFICACY SET BY THE GOVERNMENT FOR THIS TYPE OF LAMP IS 70 lumens per watt



Anong meron sa mga **Energy Labels**?

Sa **ENERGY LABELS**...

Mas MATAAS na numero ng *efficiency*,
Mas MABABA ang konsumo ng kuryente

Lowpower.com.ph Cooling Capacity: 19,600 kJ/h
 1,856 W
 Brand: **CARRIER** Power Consumption: 1,856 W
 Model: **APXR135BA** Tested @ 230 Volts, 14-50 Hz

ENERGY GUIDE

NON-DUCTED AIR CONDITIONERS

10.5
ENERGY EFFICIENCY RATIO

For units with the same cooling capacity, higher EER means lower electricity cost.
 For this model, the minimum EER standard set by the government is **8.6**.

The monthly operating cost of this model will be approximately:

RATED POWER (W)	MONTHLY USAGE (hours)	POWER RATE (Pesos/kWh)	COST OF OPERATION (Pesos)
1856	100	10.5	19.5

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SINGER PHILIPPINES INC.

Brand: **SINGER** Rated Voltage: 230 volts
 Model: REF 178A Rated Current: 0.90 ampere
 Type: ONE DOOR Rated Frequency: 60 Hertz
 Total Storage Volume: 196 Liters Energy Consumption: 0.84 kWh/24h
 Rated Power Input: 116 watts

ENERGY GUIDE

REFRIGERATORS AND FREEZERS

ENERGY EFFICIENCY FACTOR

246

(At standard test condition)
 higher EEF means lower operating cost

The daily operating cost of this model will be approximately:

Energy Consumption (kWh/24h)	Energy Cost (Pesos/kWh)	Cost of Operation (Pesos per day)
0.84	10.5	8.82

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Brand Name: **SINGER**
 Model/Type: REF 178A
 Wattage Rating: 116 watts

Lamp Specifications *

Light Output	900 lumens
Power Consumption	15 watts
Efficacy	60 lumens per watts
Average Life	8,000** hours

For lamps of similar light output, higher efficacy means more energy savings

* when tested at standard test conditions
 ** rated average life at 50% failure

Based on standard test condition

BALLAST EFFICACY FACTOR

2.6

Important: HIGHER BEF means HIGHER SAVINGS

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Brand Name: **LAMPS** EFFICACY* **80**
 Model/Type: **Brightest** lumens/ watt
 Light output, lumens: **2880**
 Wattage rating, watts: **36**

Important: For lamps with same wattage rating, HIGHER EFFICACY means MORE ENERGY SAVINGS

THE MINIMUM EFFICACY SET BY THE GOVERNMENT FOR THIS TYPE OF LAMP IS 70 lumens per watt

dti DEPARTMENT OF TRADE AND INDUSTRY PHILIPPINES 0512-345678



Bakit ito mahalaga?



- Mas tatangkilikin ng mga mamimili ang mga **produktong certified** at may mataas na **efficiency rating**.
- Mapapababa ang **konsumo ng kuryente**.
- Makakatulong ito sa **kalikasan**.



Anong mga produkto ang may **Energy Labels**?

Mayroon na sa mga:

- **Air conditioners**
- **Refrigerators (5-8 cu. Ft)**
- **Lamp ballasts**
- **Fluorescent lamps**
(compact, linear, circular)

Magkakaroon na rin sa mga:

- **TV**
- **Washing machines**
- **Maliit at malaking refrigerators**



Energy Label sa Air Conditioners

- Split- at window-type
- Cooling capacity hanggang 36,000 kJ/h (or 3.0 hp)
- Hanapin ang **Energy Efficiency Ratio** o **EER**
- **Mas mataas na EER, mas mababa** ang konsumo ng kuryente!



Energy Label sa Air Conditioners

MALAMIG COOLING CORPORATION

Brand : Cool
Model : MCC-123456
Type : Window-type RAC

Cooling Capacity: 12,000 kJ/h
Power Consumption: 930 W
Frequency: 60 Hz/ 1 Phase/ 220-230 V

ENERGY GUIDE

ROOM AIR CONDITIONERS



12.9
ENERGY EFFICIENCY RATIO

For units with the same cooling,
higher EER means lower electricity cost.
For this model, the minimum EER standard
set by the government is 9.1.

The monthly operating cost of this model will be approximately:

RATED POWER DEMAND Watt/ 1000 (kW)	X	MONTHLY USAGE Hours (h)	X	POWER RATE Pesos/ kW-h	=	COST OF OPERATION Pesos
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Data on this label is certified by:



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For additional information, ask your dealer or write or call the
Department of Energy, Lighting and Appliance Testing Laboratory,
Energy Center, Rizal Drive corner 34th Street, Fort Bonifacio, Taguig City.
Tel. No. 479-2900 local 419 • Fax 840-5562

← Specifications

← EER o Energy Efficiency Ratio

← MEPS o Minimum Energy Performance Standards

← Operating Cost Computation

← Para sa karagdagang impormasyon



Bagong Energy Label sa Air Conditioners (Proposed)



Energy Efficiency Class:
Star Rating

Efficiency: Cooling Seasonal
Performance Factor (CSPF)

Cooling Capacity

Specifications

Para sa karagdagang
impormasyon



Energy Label sa Air Conditioners

- Sa pagpili ng tamang air con, mahalaga ring malaman ang cooling capacity.
- **Cooling Capacity** ang kakayahan ng air conditioner na palamigin ang isang kwarto.
- ***Rough Estimate Method:***
C.C. = Sukat ng Kuwarto x 500

Pagkukumpara ng Compressor at Air Conditioner Ratings

Compressor Rating (Hp)	Cooling Capacity Equivalent (kJ/h)
0.75	7,385 – 8,440
1.0	9,495 – 10,550
1.5	12,660 – 13, 290
2.0	18,990 – 20,045
2.5	25,320 – 26,580



Sa Tamang Paggamit ng Air Conditioners



- Ilagay sa **tamang lugar** ang unit



Sa Tamang Paggamit ng Air Conditioners



- Ilagay sa **tamang lugar** ang unit
- Siguraduhing may **sapat na insulation**



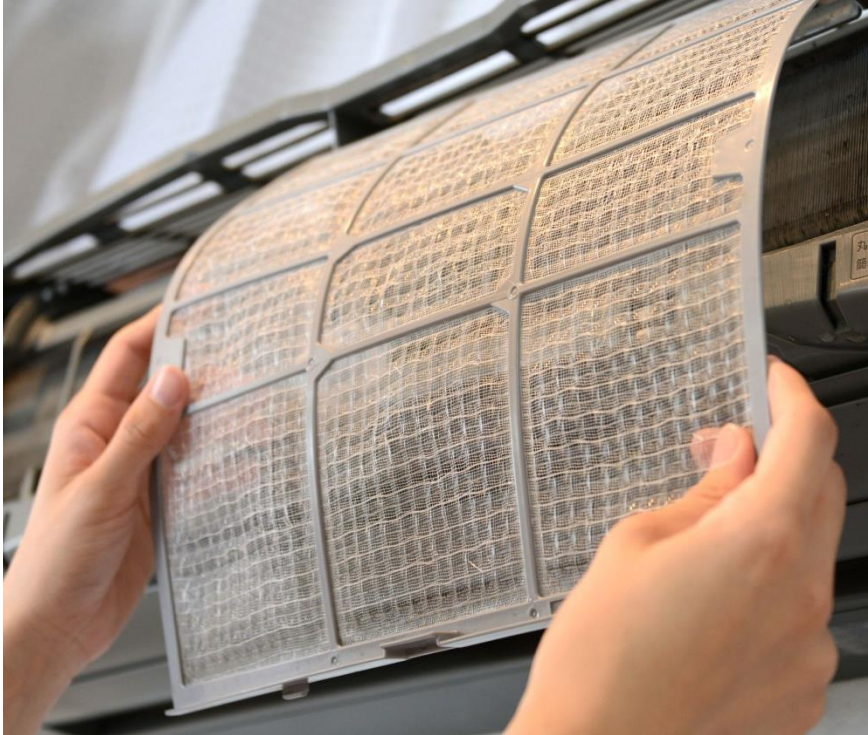
Sa Tamang Paggamit ng Air Conditioners



- Ilagay sa **tamang lugar** ang unit
- Siguraduhing may **sapat na insulation**
- I-check ang **thermostat**



Sa Tamang Paggamit ng Air Conditioners



- Ilagay sa **tamang lugar** ang unit
- Siguraduhing may **sapat na insulation**
- I-check ang **thermostat**
- Palagian **linisin** ang air conditioner



Energy Label sa Refrigerators

- Direct cooling at No frost cabinets.
- Mula 5 hanggang 8 cu. ft (o katumbas ng 142-228 litro)
- Hanapin ang **Energy Efficiency Factor** o **EEF**.
- **Mas mataas ang EEF, mas mababa** ang konsumo ng kuryente



Energy Label sa Refrigerators

MALAMIG COOLING CORPORATION

Brand: Coolers
Model: MCC-123456
Type: Direct Cool – Two Door
Total Storage Volume: 271 Liters
Rated Power Input: 140 Watts

Rated Voltage: 230 Volts
Rated Current: 1.06 Amperes
Rated Frequency: 60 Hertz
Energy Consumption: 1.38 kW-h/24h

ENERGY GUIDE

REFRIGERATORS AND FREEZERS

ENERGY EFFICIENCY FACTORS

230



(At Standard Test Conditions)

Higher EEF means lower operating cost

The daily operating cost of this model will be approximately:

Energy Consumption (kW/24h)	X	Energy Cost Pesos/ kW-h	=	Cost of Operation (Pesos/24h)
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Data on this label is certified by:



REMOVAL OF THIS LABEL BEFORE CONSUMER PURCHASE IS A VIOLATION OF REPUBLIC ACT NO. 7394

For additional information, ask your dealer or write or call the Department of Energy, Lighting and Appliance Testing Laboratory, PNOO-ERDC Compound, Commonwealth Avenue, Diliman, Quezon City, Tel. Nos.: 479-2900 loc. 559 / 927-7201 • Fax: 927-7137

← Specifications

← EEF o Energy Efficiency Factor

← Operating cost computation

← Para sa karagdagang impormasyon



Sa Tamang Paggamit ng Refrigerators

- Gumamit ng **tamang sukat** at **klase** ng ref



Sa Tamang Paggamit ng Refrigerators



- Gumamit ng **tamang sukat** at **klase** ng ref
- Ilagay ang unit sa **tamang lokasyon**



Sa Tamang Paggamit ng Refrigerators



- Gumamit ng **tamang sukat at klase** ng ref
- Ilagay ang unit sa **tamang lokasyon**
- Iwasan ang palagiang pagbubukas ng ref



Sa Tamang Paggamit ng Refrigerators



- Gumamit ng **tamang sukat at klase** ng ref
- Ilagay ang unit sa **tamang lokasyon**
- Iwasan ang palagiang pagbubukas ng ref
- Gawin regular ang **defrost** at paglilinis



Sa Tamang Paggamit ng Refrigerators



- Gumamit ng **tamang sukat at klase** ng ref
- Ilagay ang unit sa **tamang lokasyon**
- Iwasan ang palagiang pagbubukas ng ref
- Gawin regular ang **defrost** at paglilinis
- I-check ang **rubber gasket**



Energy Label sa Lamp Ballasts



Ang **BALLAST** ay

- Nagsisilbing bantay ng *light source*
- Nagwawasto ng boltahe,
- nagma-*match* ng *line voltage* sa *operating voltage* ng bombilya
- Naglilimita sa daloy ng kuryente sa bombilya para maiwasang ang pagkasira nito.
- Dapat ay akma ang *wattage* (*electric power in watts*) ng ballast sa *fluorescent lamp* na gagamitin.



Energy Label sa Lamp Ballasts

- May 2 uri: **magnetic** at **electronic**
- Hanapin ang **Ballast Efficacy Factor** o **BEF**
- Mas mataas ang **BEF**, mas mababa ang konsumo ng kuryente.



Based on standard test condition

2.6

BALLAST EFFICACY FACTOR



0512-345678

Important: HIGHER BEF means HIGHER SAVINGS



Energy Label sa CFLs

- Ang mga **compact fluorescent lamps o CFL** ay mga ginawang maliit na fluorescent lamps bilang pamalit sa mga incandescent bulbs
- Mga **self-ballasted lamps** mula **3 hanggang 65 watts**
- Hanapin ang **Efficacy**
- Mas mataas ang efficacy, mas mababa ang konsumo ng kuryente



Energy Label sa CFLs

Brand Name: **MALIWANAG**
Model/Type: **2U15W**



Lamp Specifications¹

Light Output	900 lumens
Power Consumption	15 watt
Efficacy ³	60 lumens per watt
Average Life ²	8000 hours

For lamps of similar light output, higher efficacy means more energy saving

¹ when tested at standard test condition
² rated average life at 50% failure
³ The minimum efficacy set by the Government for this type of lamp is 57 lumens per watt.

CTRL NO: 001021212PD15



- ← **Lighting Output** kabuuang liwanag na nagmumula sa bombilya
- ← **Power Consumption** kabuuang konsumo sa kuryente ng bombilya
- ← **Efficacy** ang nagsasabi kung gaano ka-efficient ang bombilya sa paggamit ng kuryente sa pagpapa-ilaw
- ← **Average Life** kalimitang haba ng buhay ng isang bombilya



The yellow label.
Empowering the
Filipino Consumers.



Sa Tamang Paggamit ng CFLs

- Gumamit ng **CFL** sa halip na **incandescent bulb**



25 W

500 lumens

25 W x 9 bulbs

500 lumens



Sa Tamang Paggamit ng CFLs

- Gumamit ng **CFL** sa halip na **incandescent bulb**
- Ikabit ang CFL ng **vertical-base up**



Sa Tamang Paggamit ng CFLs

- Gumamit ng **CFL** sa halip na **incandescent bulb**
- Ikabit ang CFL ng **vertical-base up**
- Gumamit ng ilaw base sa **pangangailangan**



Sa Tamang Paggamit ng CFLs

- Gumamit ng **CFL** sa halip na **incandescent bulb**
- Ikabit ang CFL ng **vertical-base up**
- Gumamit ng ilaw base sa **pangangailangan**
- Palagiang **linisin** ang mga bombilya



Sa Tamang Paggamit ng CFLs

- Gumamit ng **CFL** sa halip na **incandescent bulb**
- Ikabit ang CFL ng **vertical-base up**
- Gumamit ng ilaw base sa **pangangailangan**
- Palagiang **linisin** ang mga bombilya
- Huwag gumamit ng bombilyang **pundido** at **hindi certified**



Energy Label sa Iba Pang Fluorescent Lamps

- Double-capped, Triphosphor at halophosphate linear at circular fluorescent lamps
- Hanapin ang **Efficacy**
- **Mas mataas ang efficacy, mas mababa** ang konsumo ng kuryentea



Energy Label sa Iba Pang Fluorescent Lamps



Brand Name: MALIWANAG LAMPS **EFFICACY***

Model/Type: U2-LFL

Light Output, lumens: 2880

Wattage rating, watts: 36

80



*based on standard test condition

Important: For lamps with same wattage rating, Higher Efficacy means more saving.
THE MINIMUM EFFICACY SET BY THE GOVERNMENT FOR THIS TYPE OF LAMP IS 78 lumens per watt

001061212T36D


Brand Name: MALIWANAG LAMPS **EFFICACY***

Model/Type: U2-FFL

Light Output, lumens: 2240

Wattage rating, watts: 32

70



*based on standard test condition

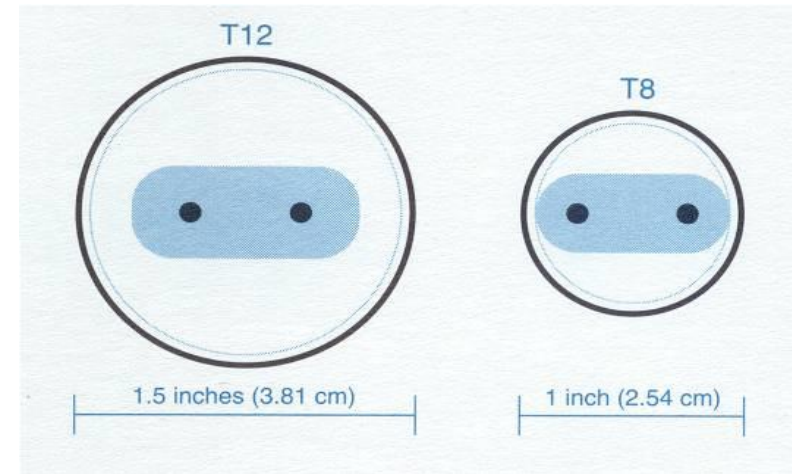
Important: For lamps with same wattage rating, Higher Efficacy means more saving.

001061212T36D



Sa Tamang Paggamit ng Fluorescent Lamps

- Palitan ang pundidong matabang ilaw ng mas **mapayat na fluorescent lamp**



Sa Tamang Paggamit ng Fluorescent Lamps

- Palitan ang pundidong matabang ilaw ng mas **mapayat na fluorescent lamp**
- Palagiang **maglinis** ng ilawan at **itapon** ito nang tama



Sa Tamang Paggamit ng Fluorescent Lamps

- Palitan ang pundidong matabang ilaw ng mas **mapayat na fluorescent lamp**
- Palagiang **maglinis** ng ilawan at **itapon** ito nang tama
- Sa mga problema sa ilaw at lamp ballast, may **warranty** na ang mga ito



Ang produktong may **Energy Label** ay may...

Para sa mga Gawang Pilipinas
na pasado sa Philippine
National Standard



Para sa mga produktong
imported na pasado sa
Philippine National Standard



Bitsahin ang aming website – www.doe.gov.ph

The screenshot shows a web browser displaying the Department of Energy website. The main content is a PDF document titled "LIST OF CERTIFIED REFRIGERATORS AS OF SEPTEMBER 2016". The document contains a table with the following columns: BRAND, MODEL, TYPE, TOTAL STORAGE VOLUME (liters), ENERGY CONSUMPTION (kW-h/24h), and EEF.

	BRAND	MODEL	TYPE	TOTAL STORAGE VOLUME (liters)	ENERGY CONSUMPTION (kW-h/24h)	EEF
A. Locally Manufactured Models						
1	SANYO	SR-D39TMS	Two Door/Direct Cooling	372	1.96	167
2	SAMSUNG	RT32FAJCDSP	Frost Free - Inverter Type	322	1.06	367
3	SAMSUNG	RT32FARCDSP	Frost Free - Inverter Type	322	1.11	336
4	SANYO	SR-D49T	Two Door/Direct Cooling	322	2.15	180
5	SAMSUNG	RT32K5032SL	Frost Free Inverter	321	0.89	415
6	SAMSUNG	RT29FAJBDSP	Two Door/Automatic Defrost	302	0.95	372
7	SAMSUNG	RT29FARBDSP	Frost Free Inverter	302	0.95	372
8	SAMSUNG	RT37STPN	Frost Free	304	1.44	259
9	SAMSUNG	RT41LSPN	Frost Free	327	1.47	263
10	SAMSUNG	RB29K5032UT	Frost Free	300	0.86	404
11	SAMSUNG	RT29K5032SL	Frost Free	300	0.86	404
12	SAMSUNG	RT29K5132SL	Frost Free Inverter	300	0.86	404
13	SAMSUNG	RB29FERNDSS	Frost Free - Inverter	290	1.05	356
14	SHARP	SJ-38T-SL	Frost Free	288	1.72	198
15	PANASONIC	NR-B10714B	Frost Free	288	1.36	250
16	PANASONIC	NR-B10715B	Two Door/Direct Cooling	289	1.38	250
17	CONDURA	CTD310MN	Two Door/Direct Cooling	278	1.26	267
18	CONDURA	CTD310MN-G1	Two Door/Direct Cooling	278	1.59	220
19	KELVINATOR	KTD310MN-G1	Two Door/Direct Cooling	278	1.59	220
20	CONDURA	CTD310MN-G1a	Two Door/Direct Cooling	278	1.32	258



Maraming Salamat Po!



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Pinagkunan ng mga Impormasyon

- All information stated in this presentation are available online in the Department of Energy Philippines Website. www.doe.gov.ph.
- To learn more about the lighting products, consult *Manual of Practice on Efficient Lighting*. Printed by the Institute of Integrated Electrical Engineers of the Philippines, Inc and the Department of Energy Philippines(2011).
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